

Service
Service
Service



It is only for serial number :NSxxxxxxxxxxx

Service Manual

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Published by LX 1231 Service Audio

Printed in The Netherlands

Subject to modification

© 3141 785 34571

Version 1.1



PHILIPS



SPECIFICATIONS

Dimensions (L x W x H)	341mm x 236mm x 122mm
Weight	1.8 kg
Power supply	DC 9V 1.5 A 110V-127V, 60HZ; 220-240V, 50HZ
Power consumption	Active <12 W
Power output	2 x 1 W RMS
Operating temperature range	-10 °C - 50 °C 14 °F -122 °F

USB playability information

Compatible USB devices:

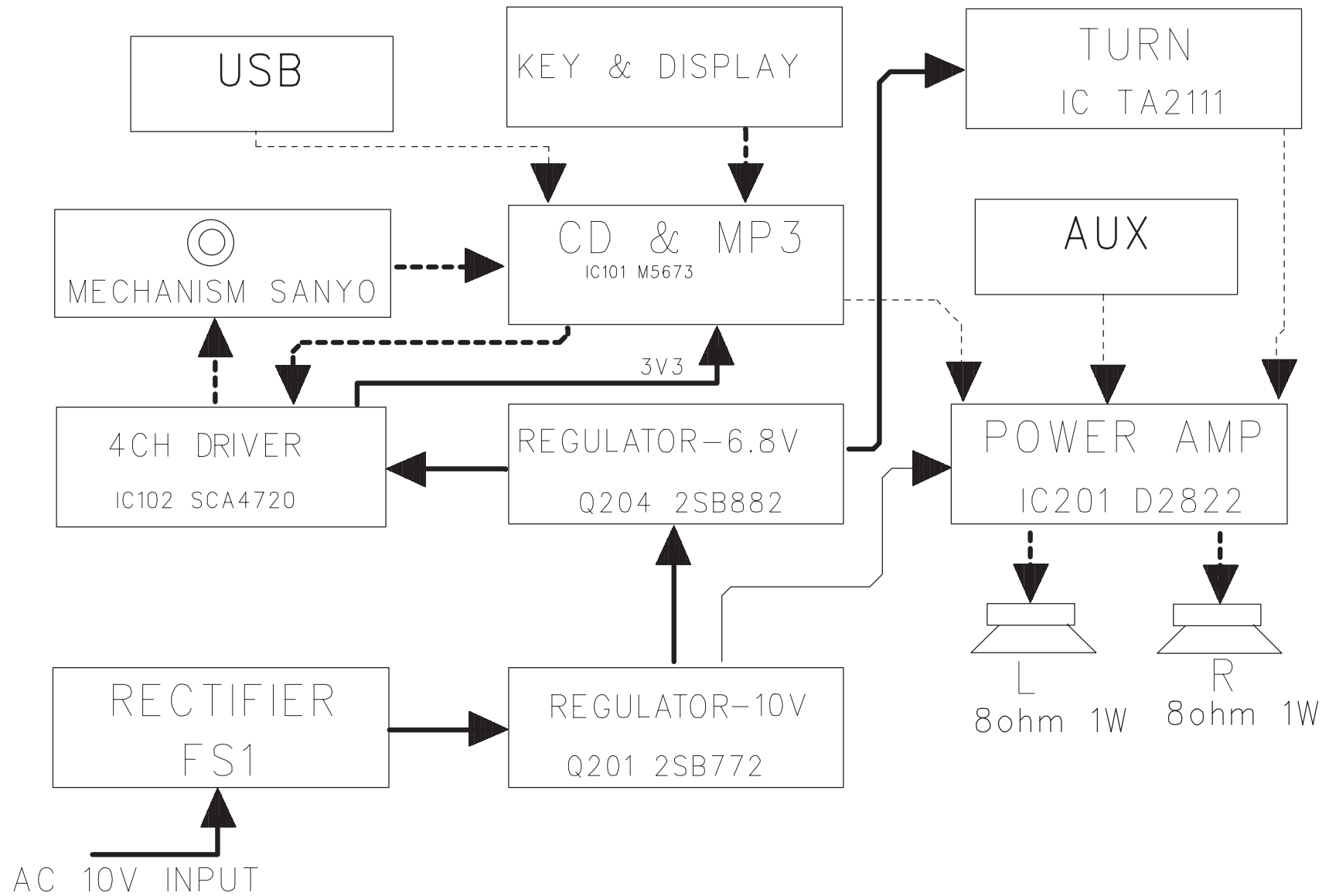
- USB flash memory (USB 2.0 or USB1.1)
- USB flash players (USB 2.0 or USB1.1)
- *memory cards (requires an additional card reader to work with this apparatus)*

Supported formats:

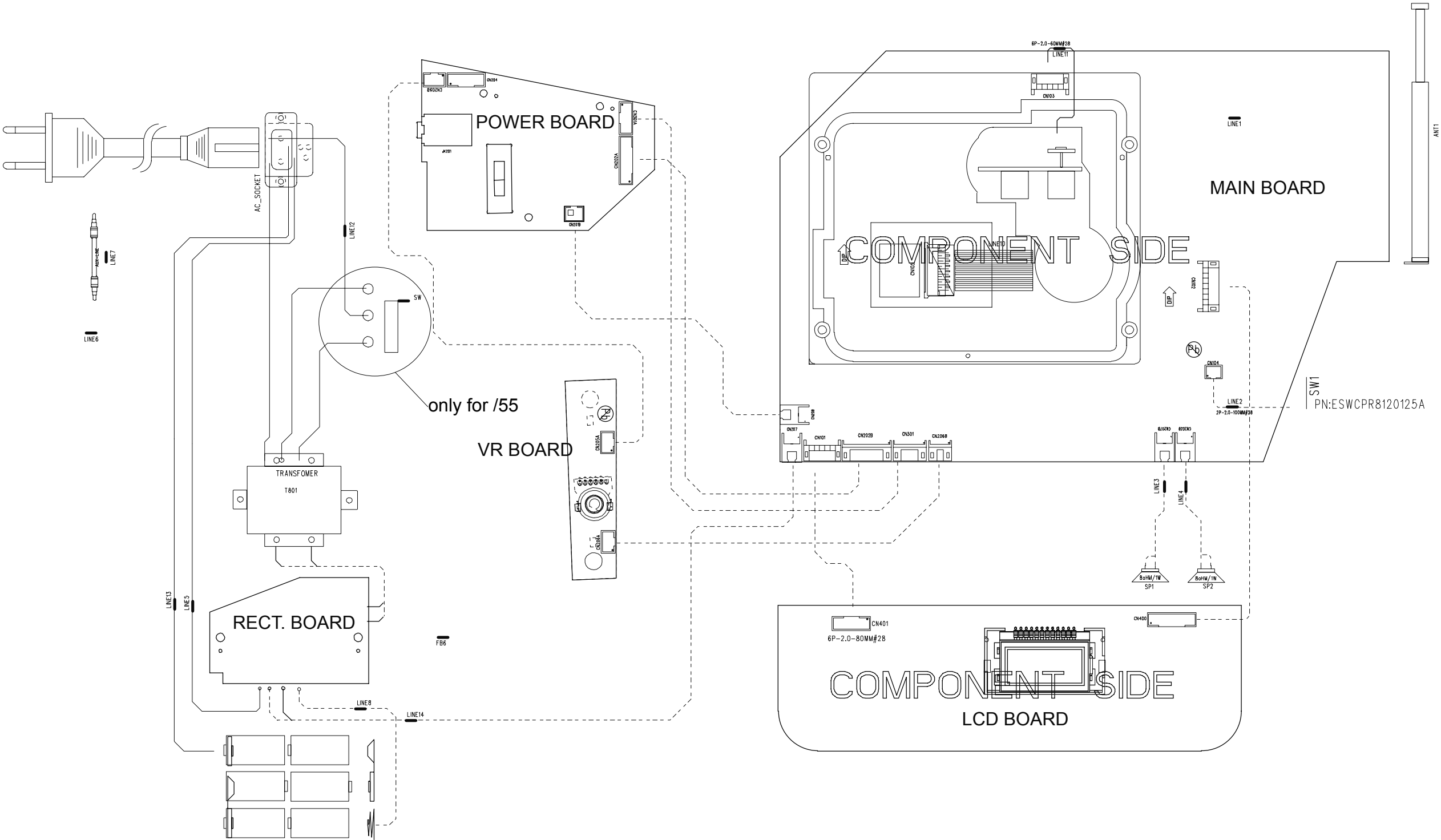
- USB or memory file format FAT12, FAT16, FAT32 (sector size: 512 bytes)
- *MP3 bit rate (data rate): 32-320 Kbps and variable bit rate*
- *WMA v9 or earlier*
- *Directory nesting up to a maximum of 8 levels*
- *Number of albums/ folders: maximum 99*
- *Number of tracks/titles: maximum 999*
- *ID3 tag v2.0 or later*
- *File name in Unicode UTF8 (maximum length: 128 bytes)*

Unsupported formats:

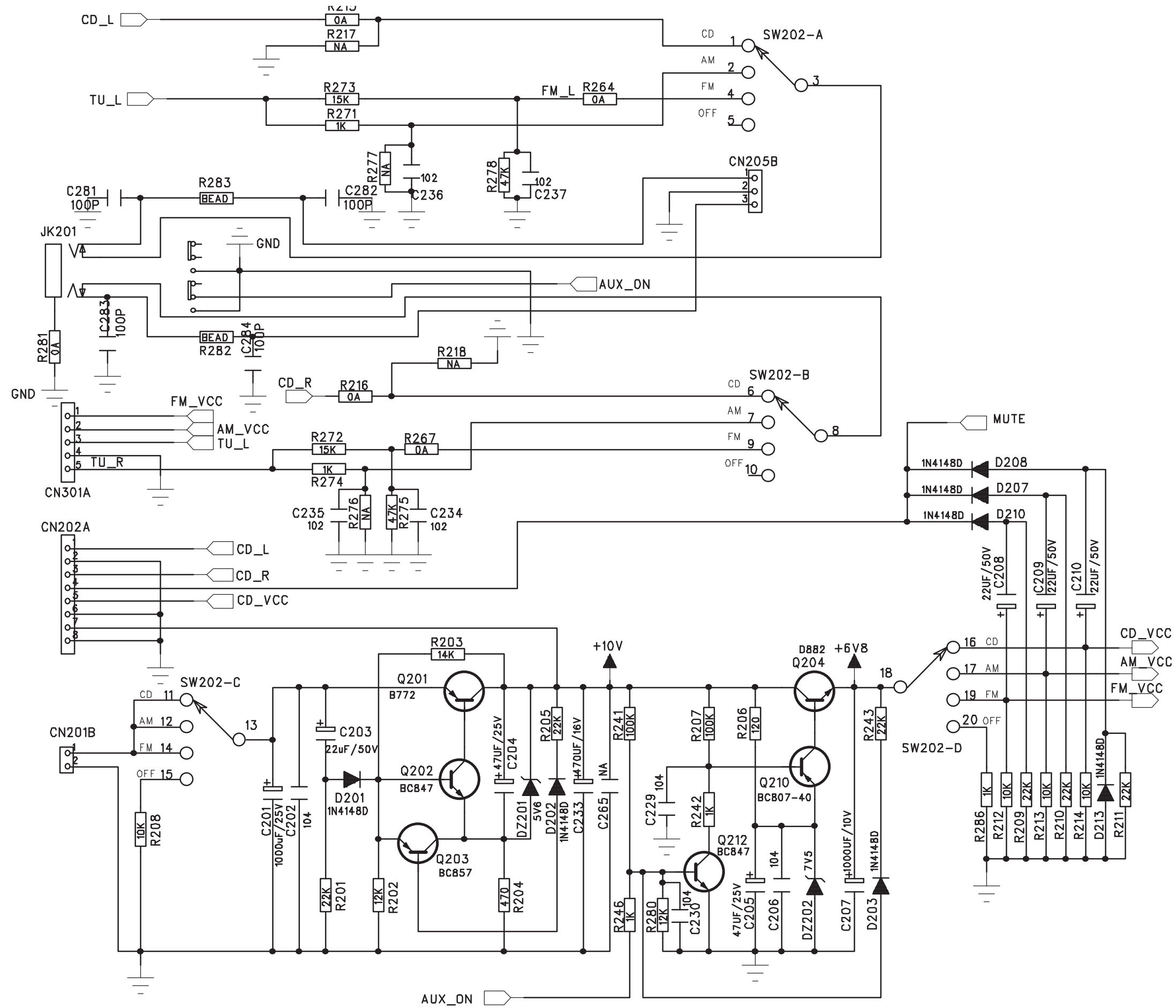
- *Empty albums: an empty album is an album that does not contain MP3/ WMA files, and is not be shown in the display.*
- Unsupported file formats are skipped. For example, Word documents (.doc) or MP3 files with extension .dlf are ignored and not played.
- AAC, WAV, PCM audio files
- DRM protected WMA files (.wav, .m4a, .m4p, .mp4, .aac)
- WMA files in Lossless format

SET BLOCK DIAGRAM

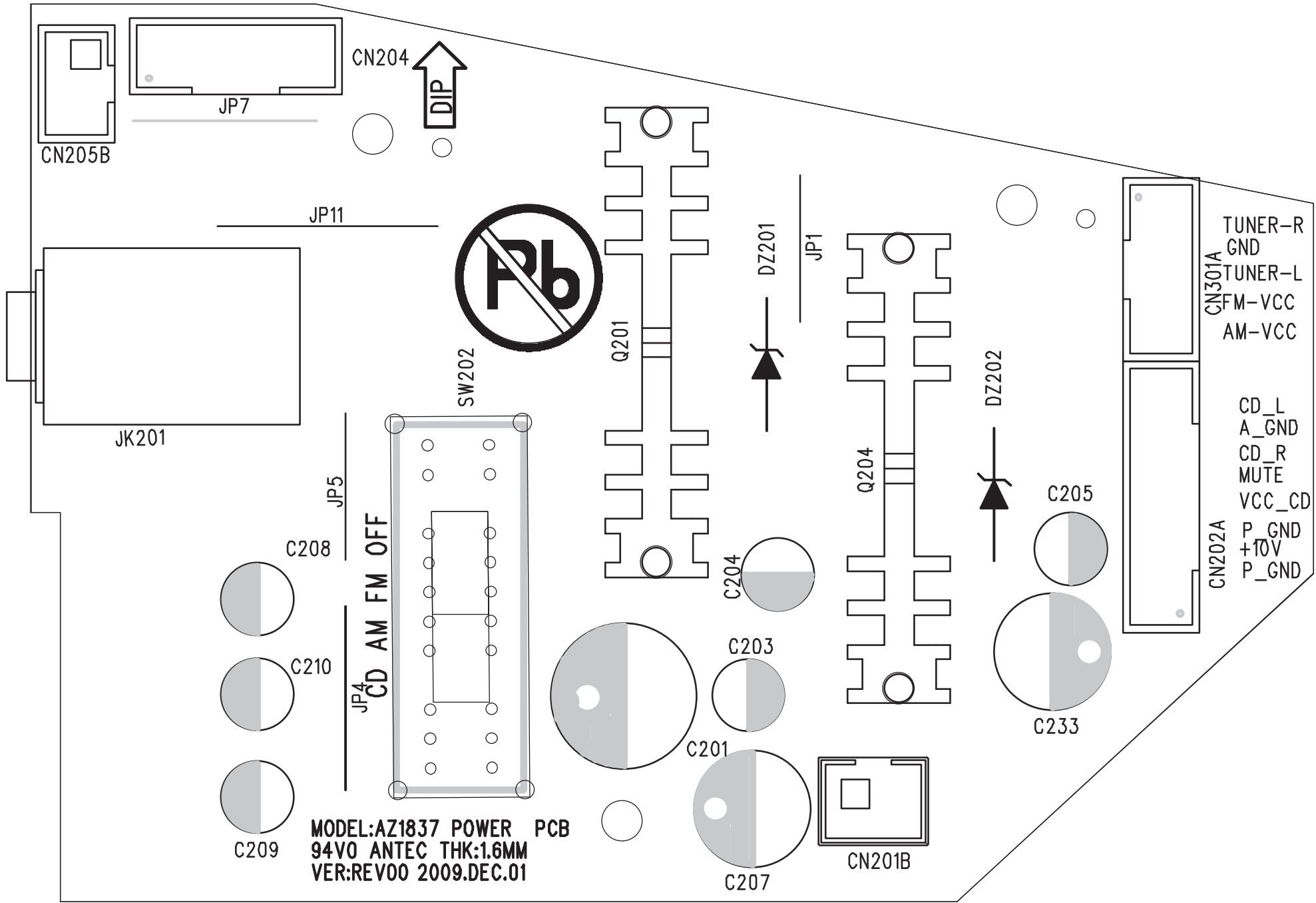
SET WIRING DIAGRAM



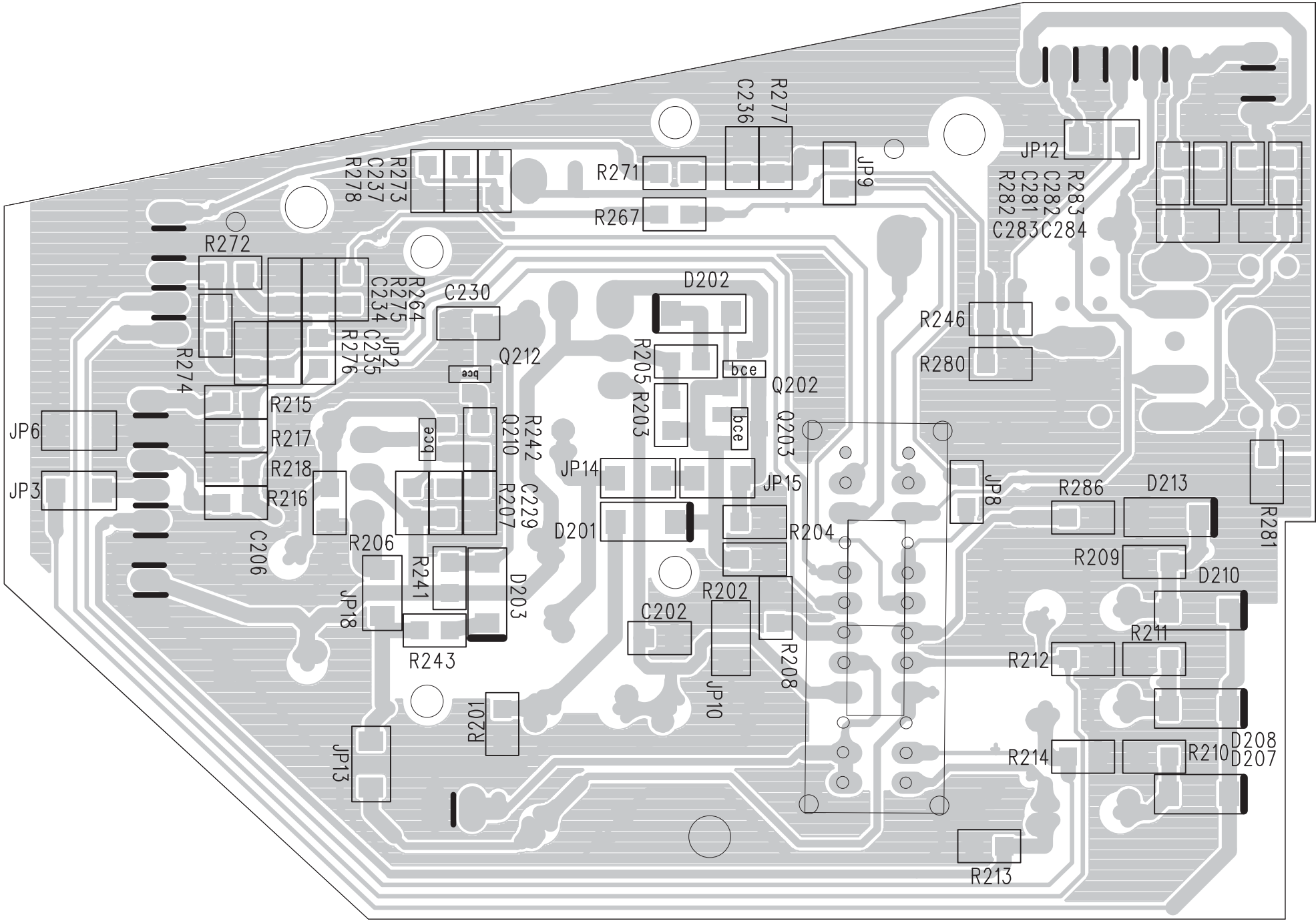
POWER BOARD-CIRCUIT DIAGRAM



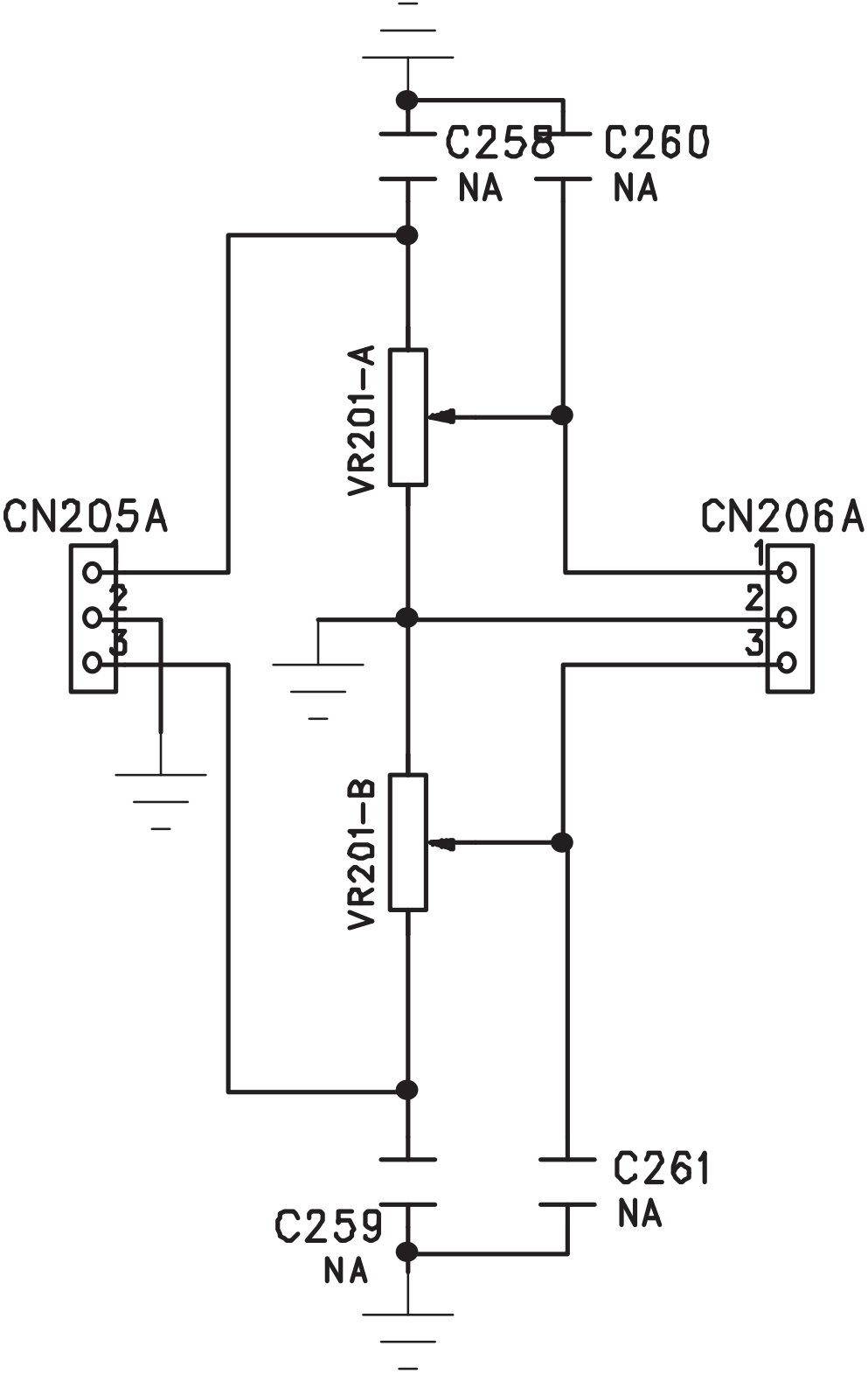
POWER BOARD-LAYOUT DIAGRAM
TOP VIEW



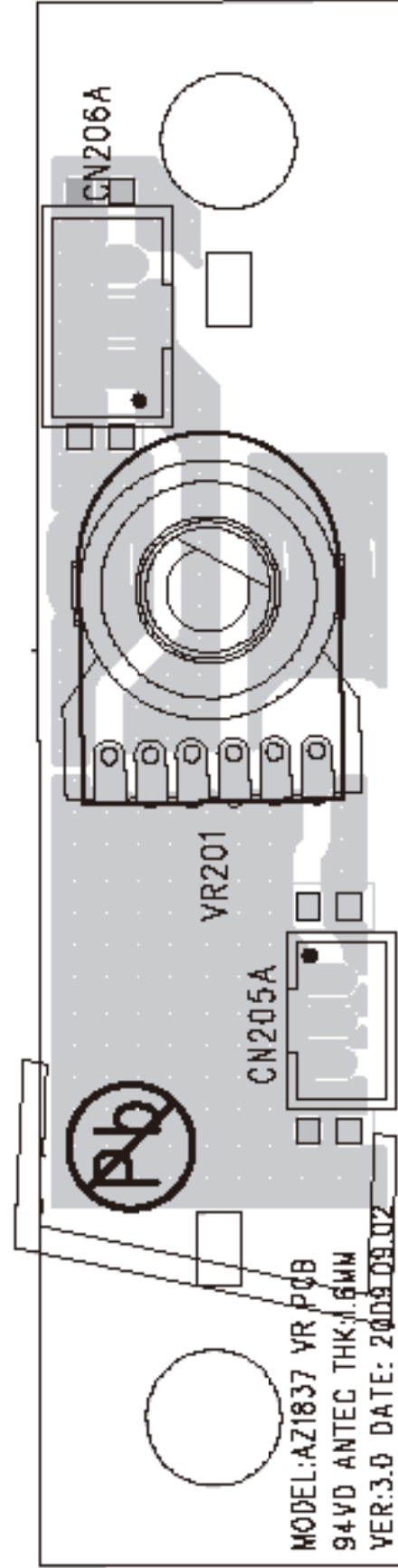
POWER BOARD-LAYOUT DIAGRAM
BOTTOM VIEW



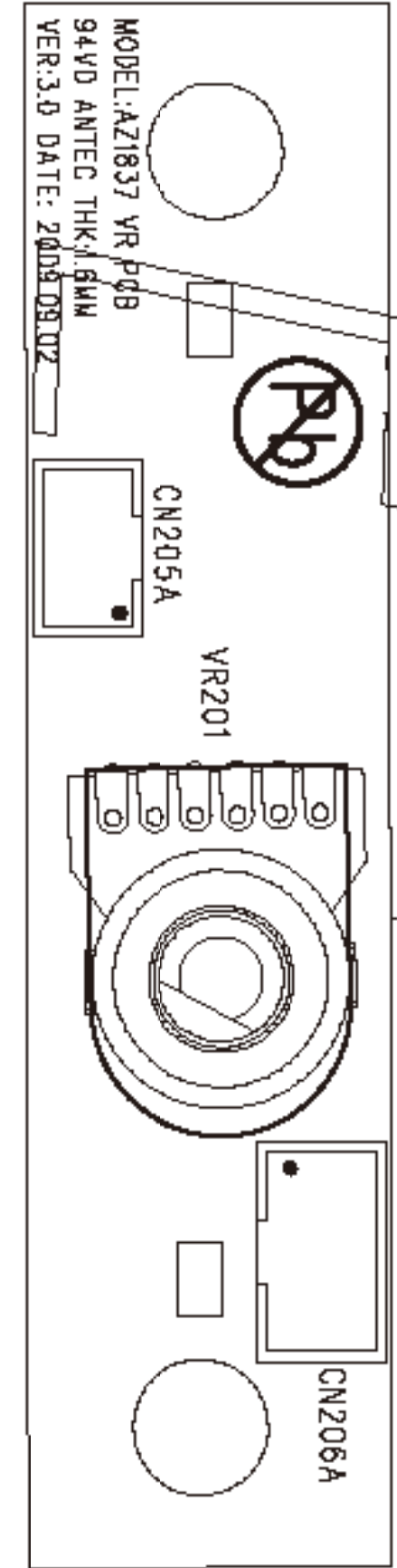
VR BOARD-CIRCUIT DIAGRAM



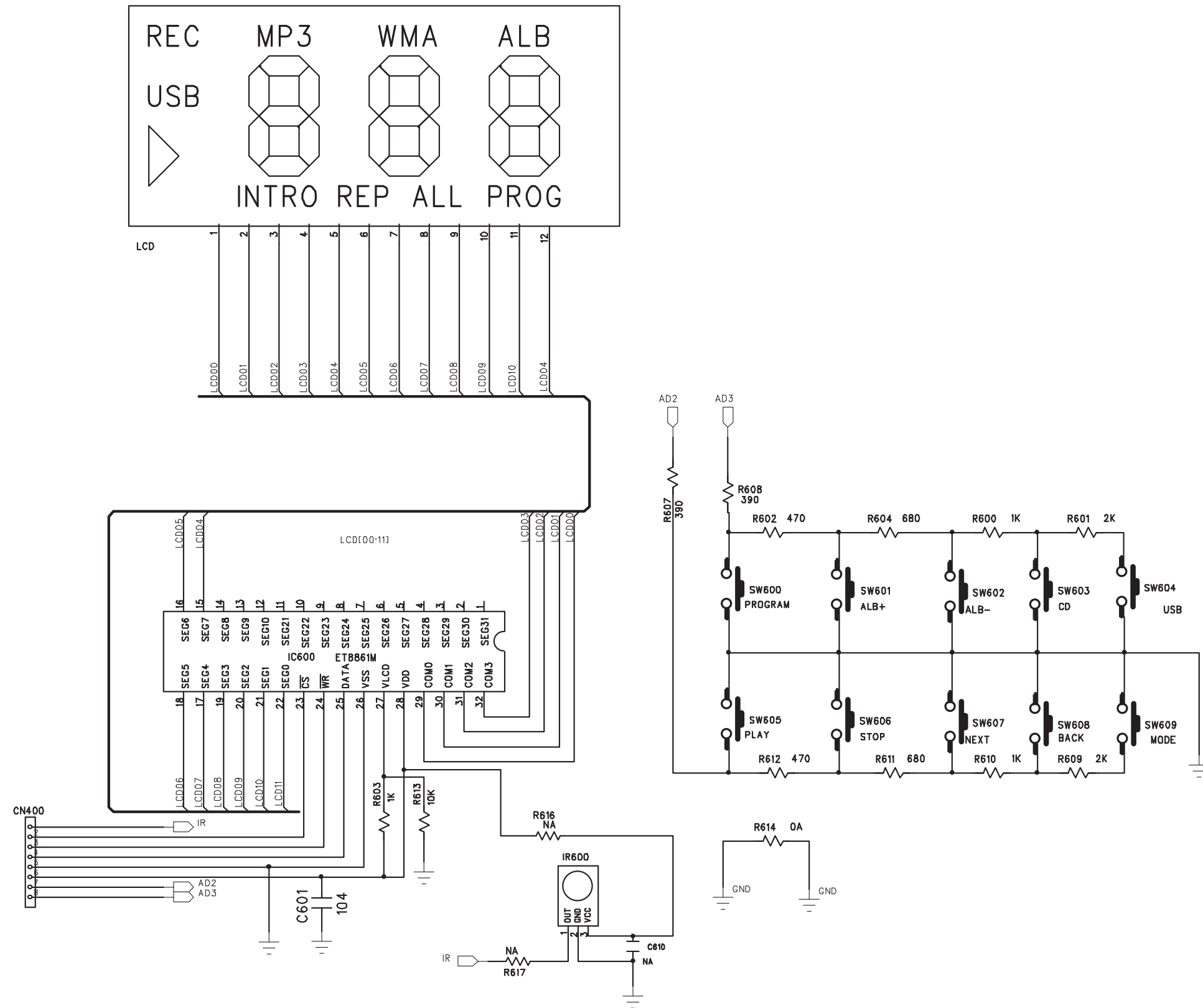
VR BOARD-LAYOUT DIAGRAM
TOP VIEW

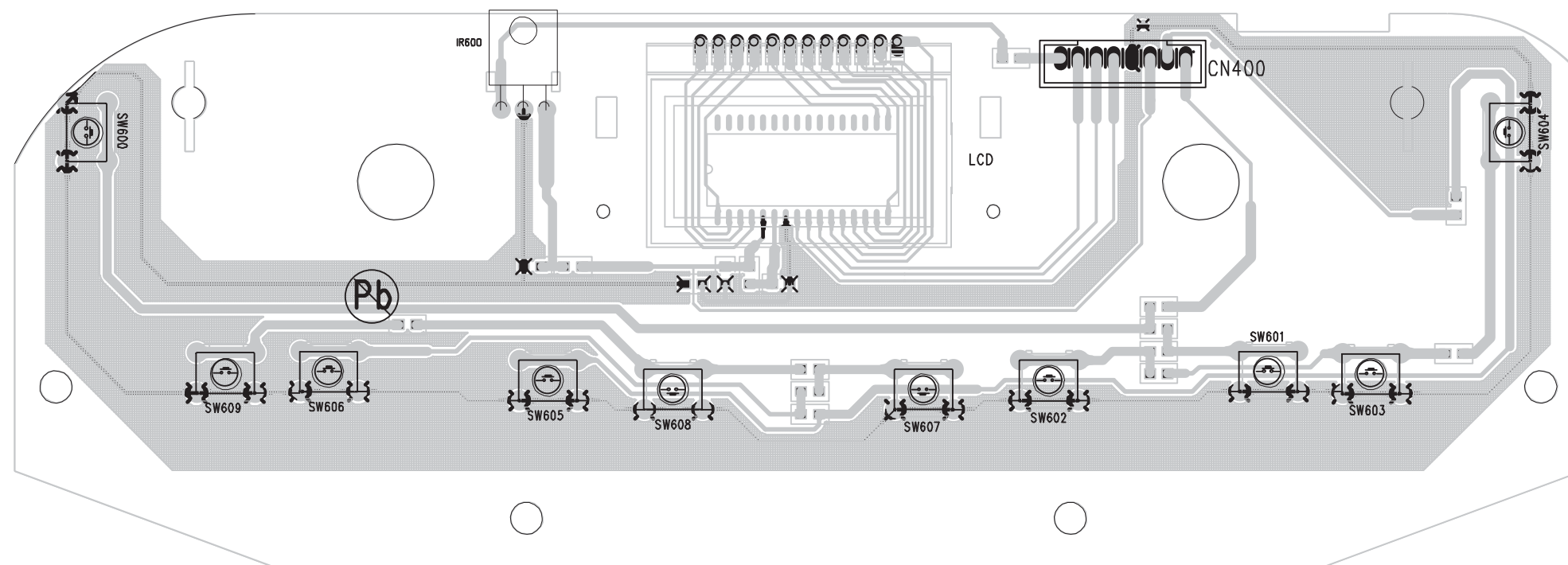


VR BOARD-LAYOUT DIAGRAM
BOTTOM VIEW

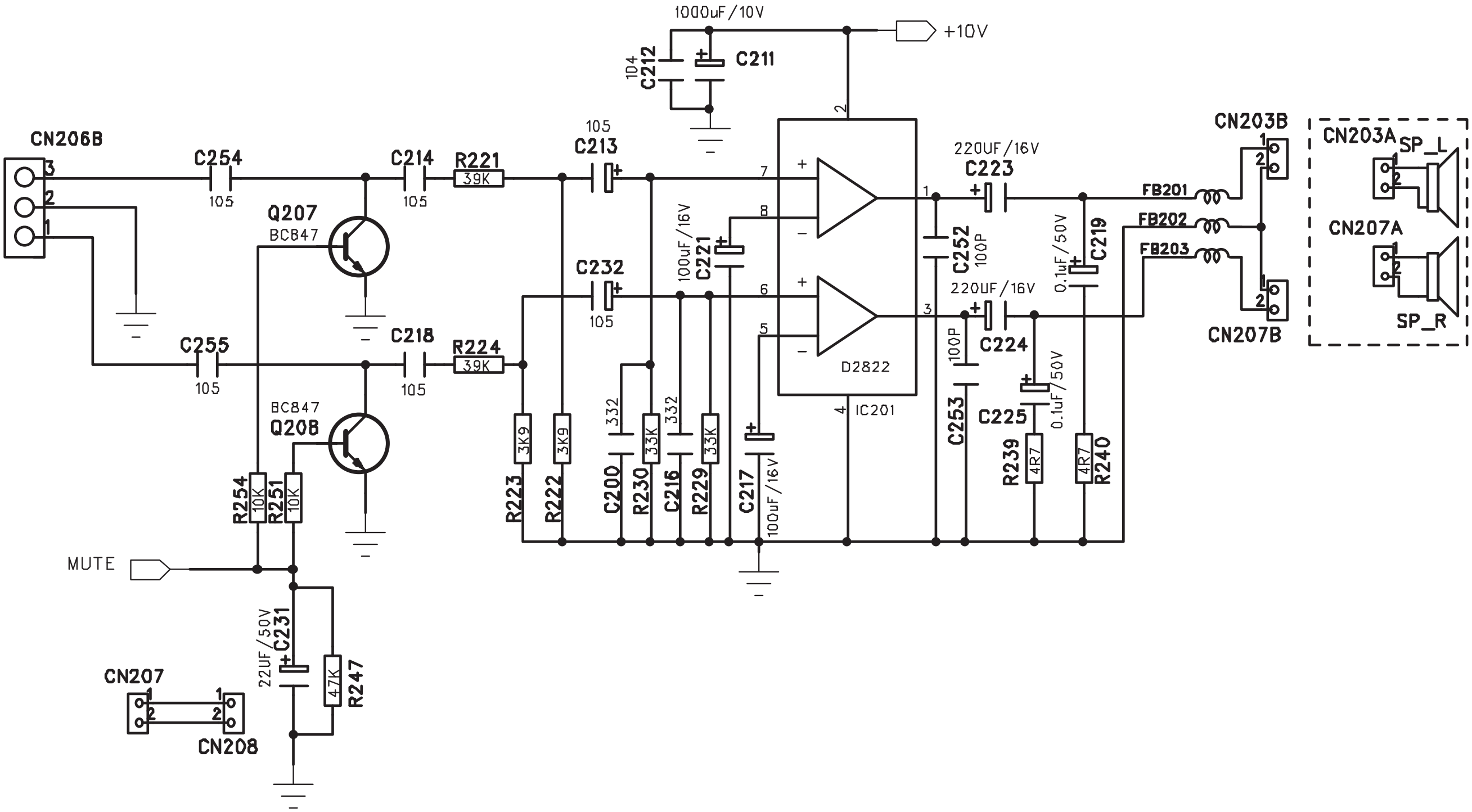


LCD BOARD-CIRCUIT DIAGRAM

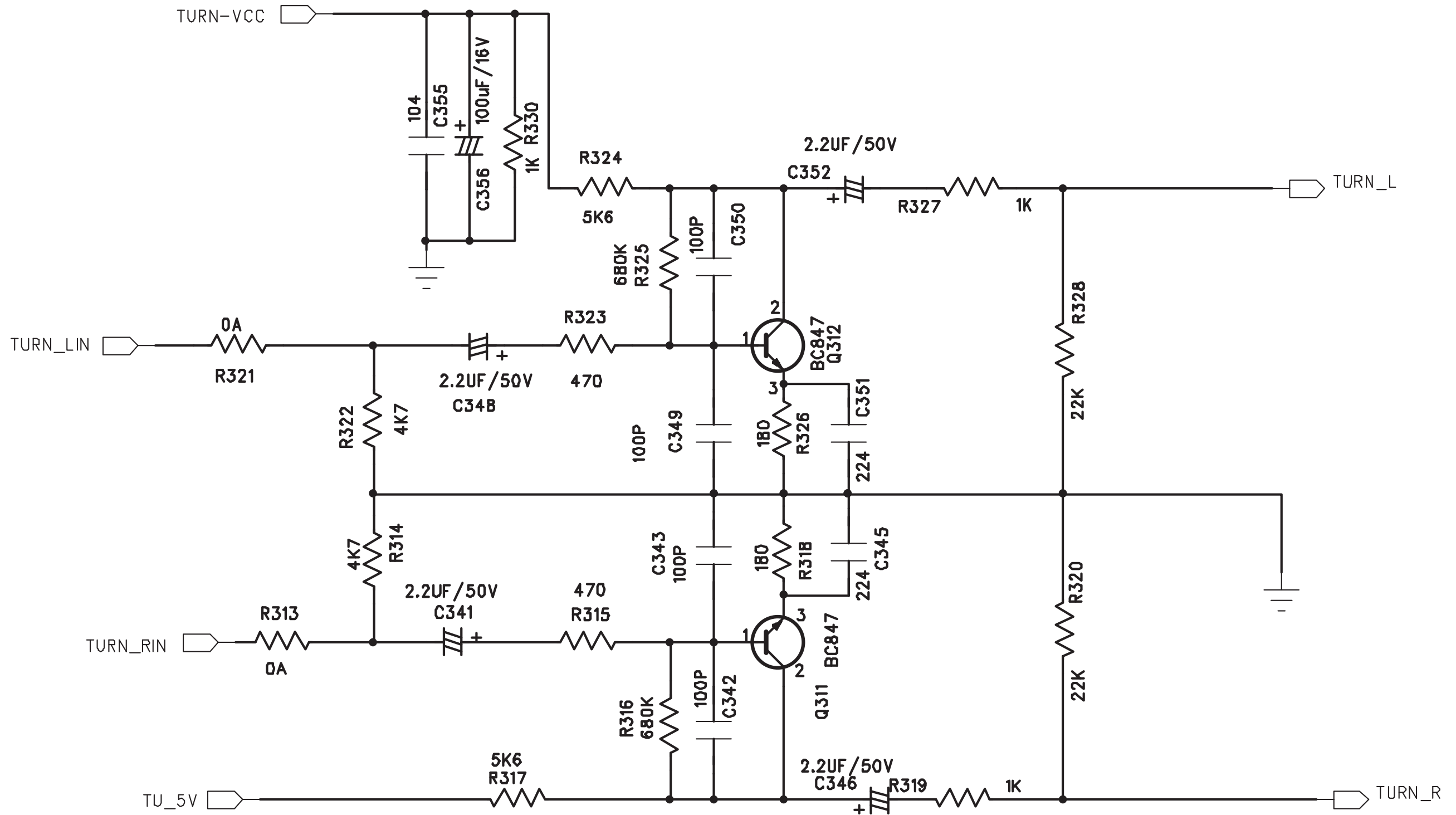




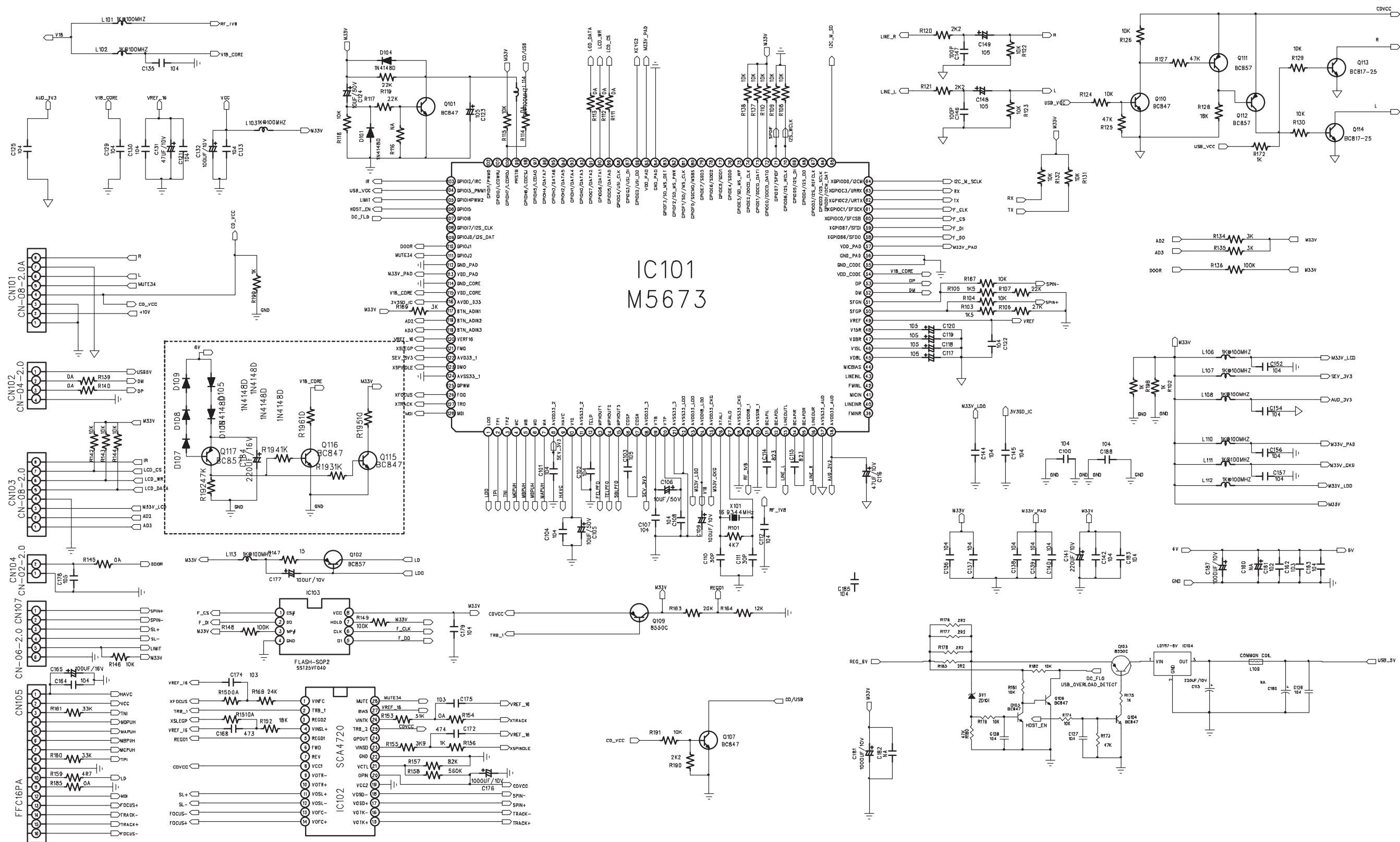
MAIN BOARD-CIRCUIT DIAGRAM
(AMP PART)



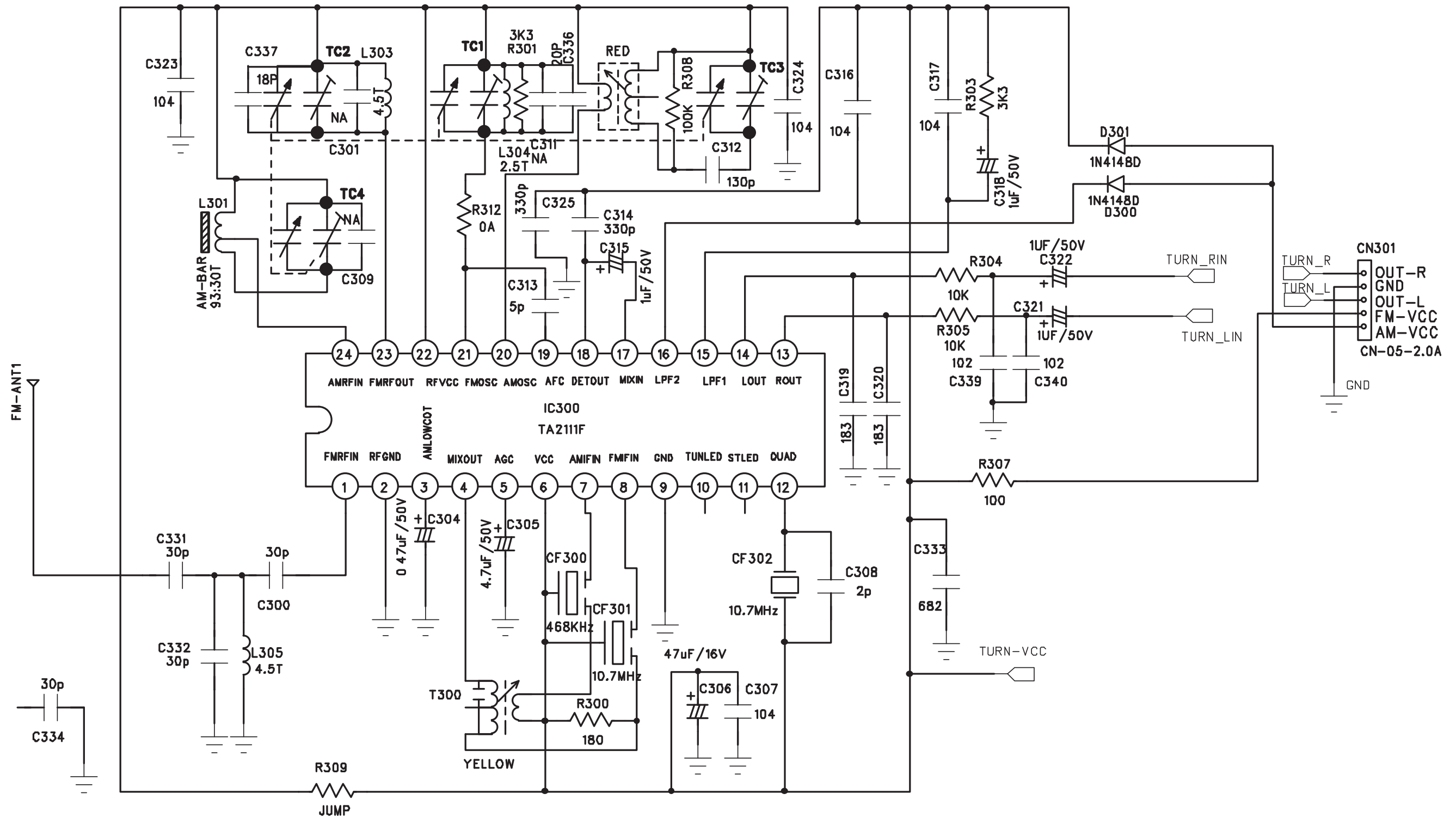
MAIN BOARD-CIRCUIT DIAGRAM (BUFFER PART)



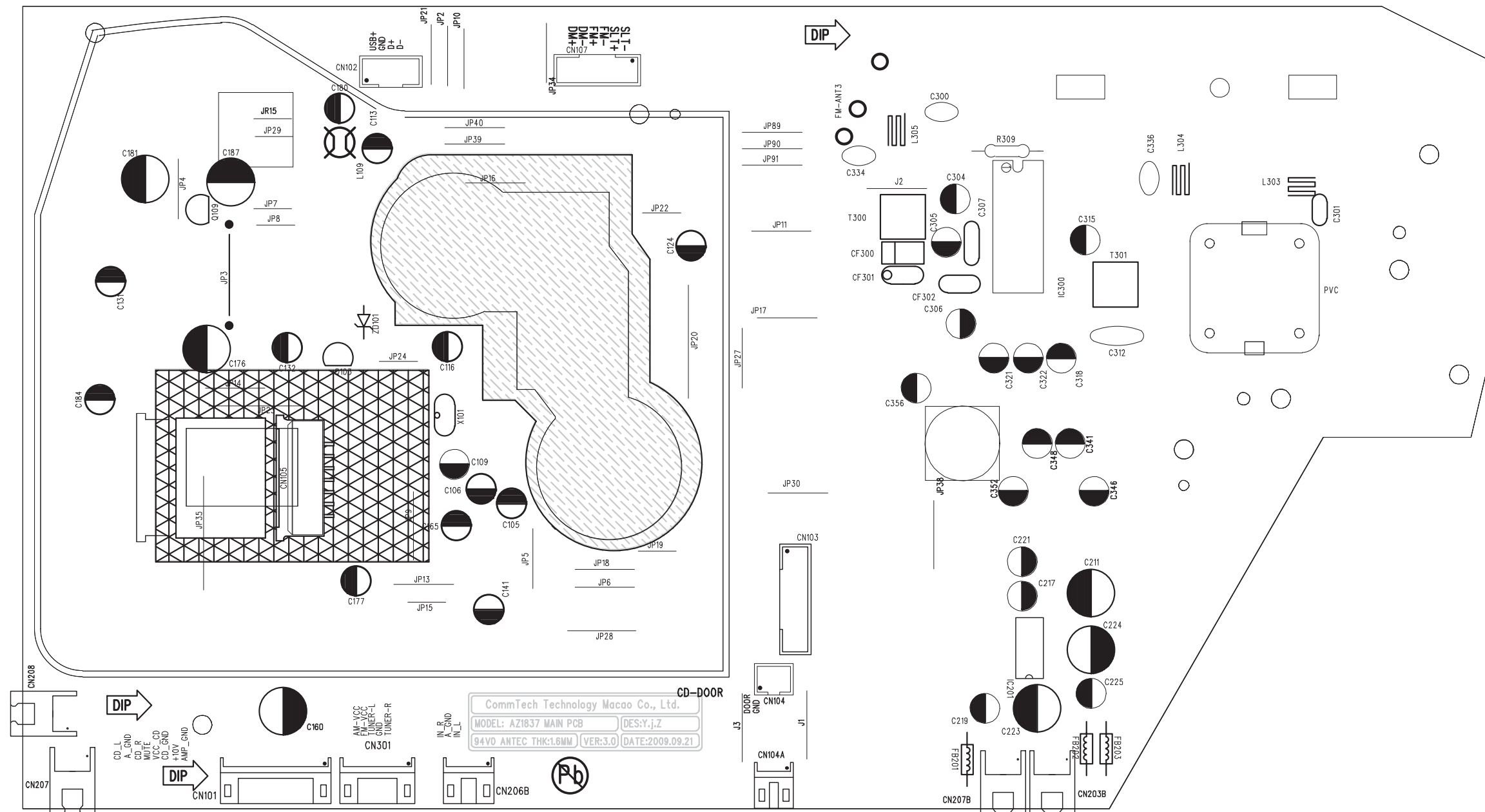
MAIN BOARD-CIRCUIT DIAGRAM (CD PART)



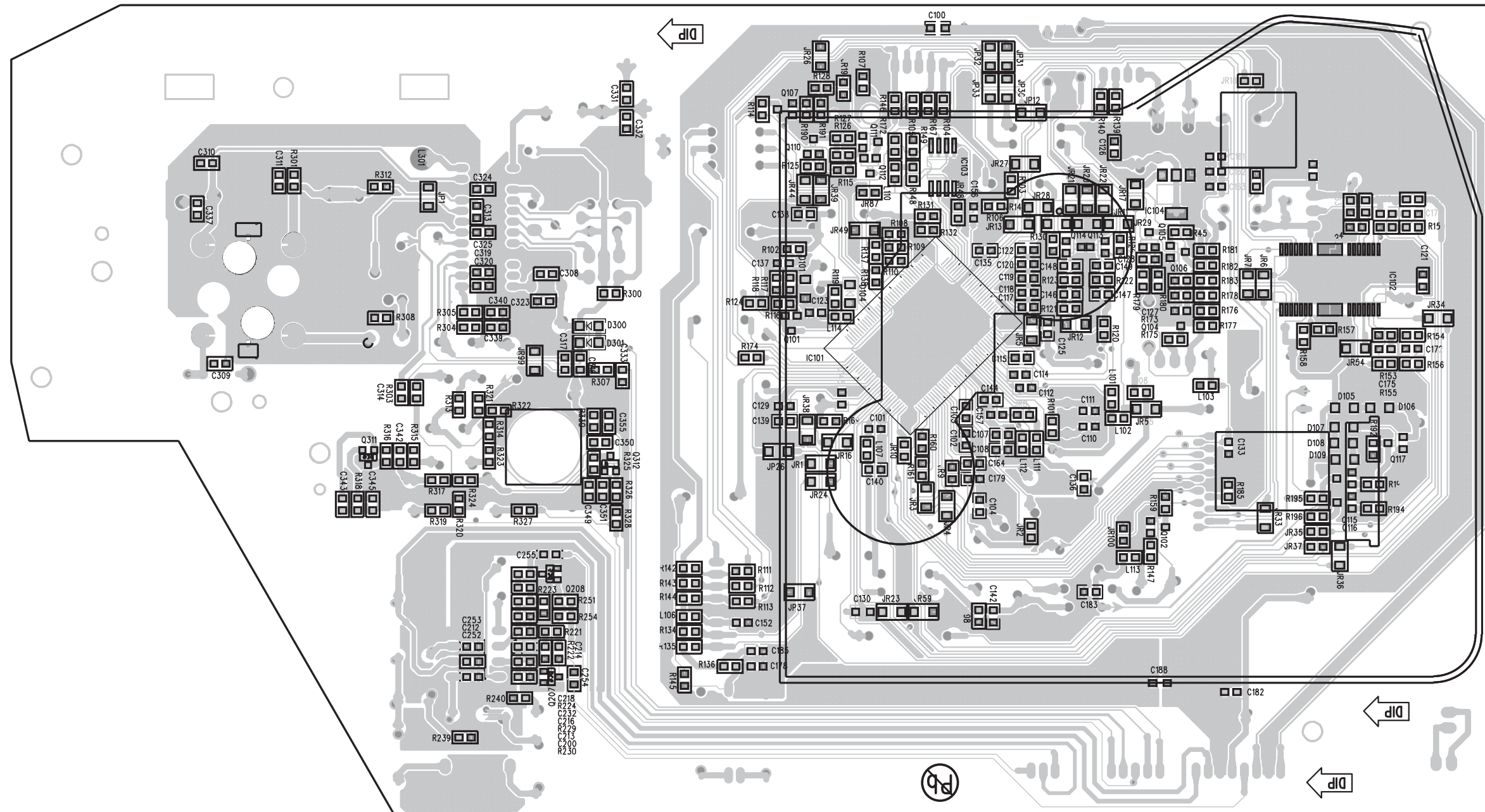
MAIN BOARD-CIRCUIT DIAGRAM (TUNER PART)



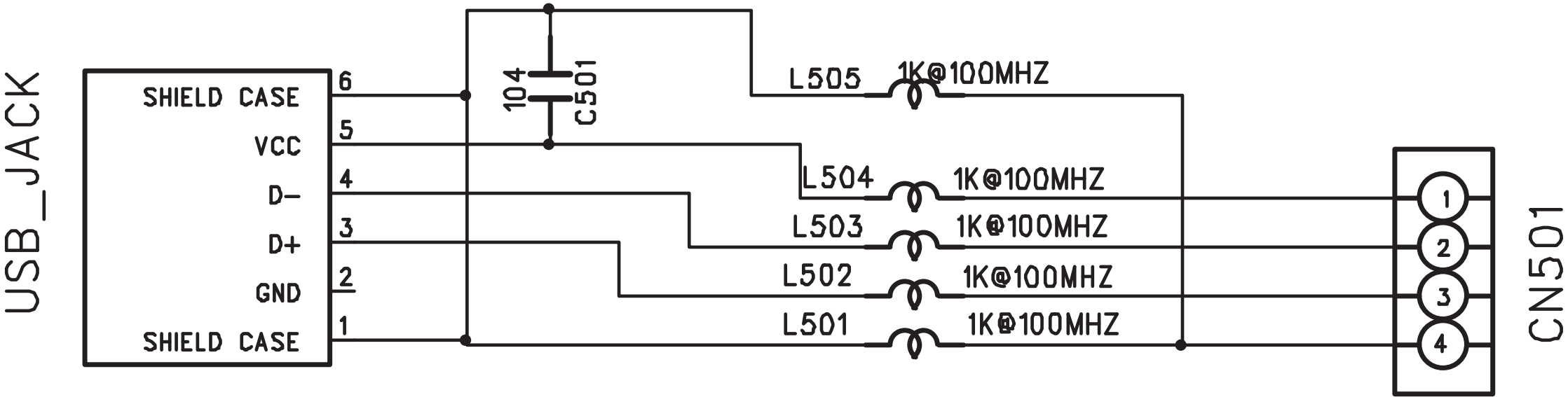
MAIN BOARD-LAYOUT DIAGRAM (TOP VIEW)



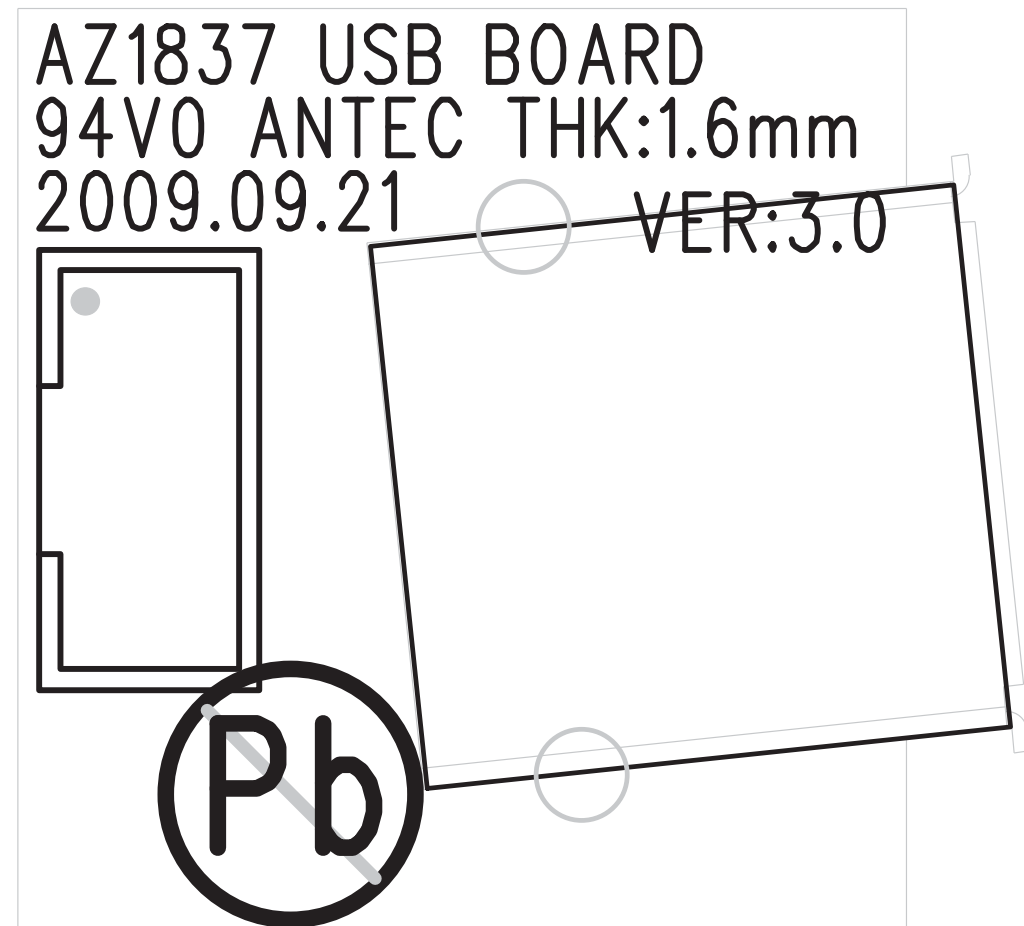
MAIN BOARD-LAYOUT DIAGRAM (BOTTOM VIEW)



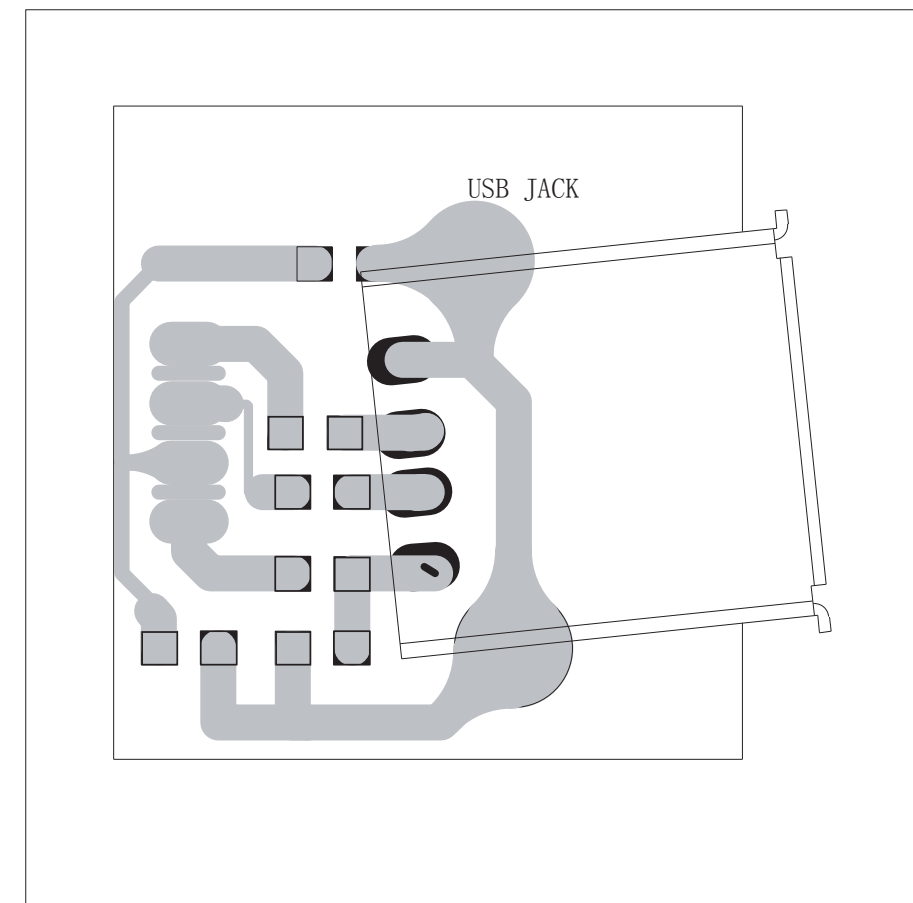
USB BOARD-CIRCUIT DIAGRAM



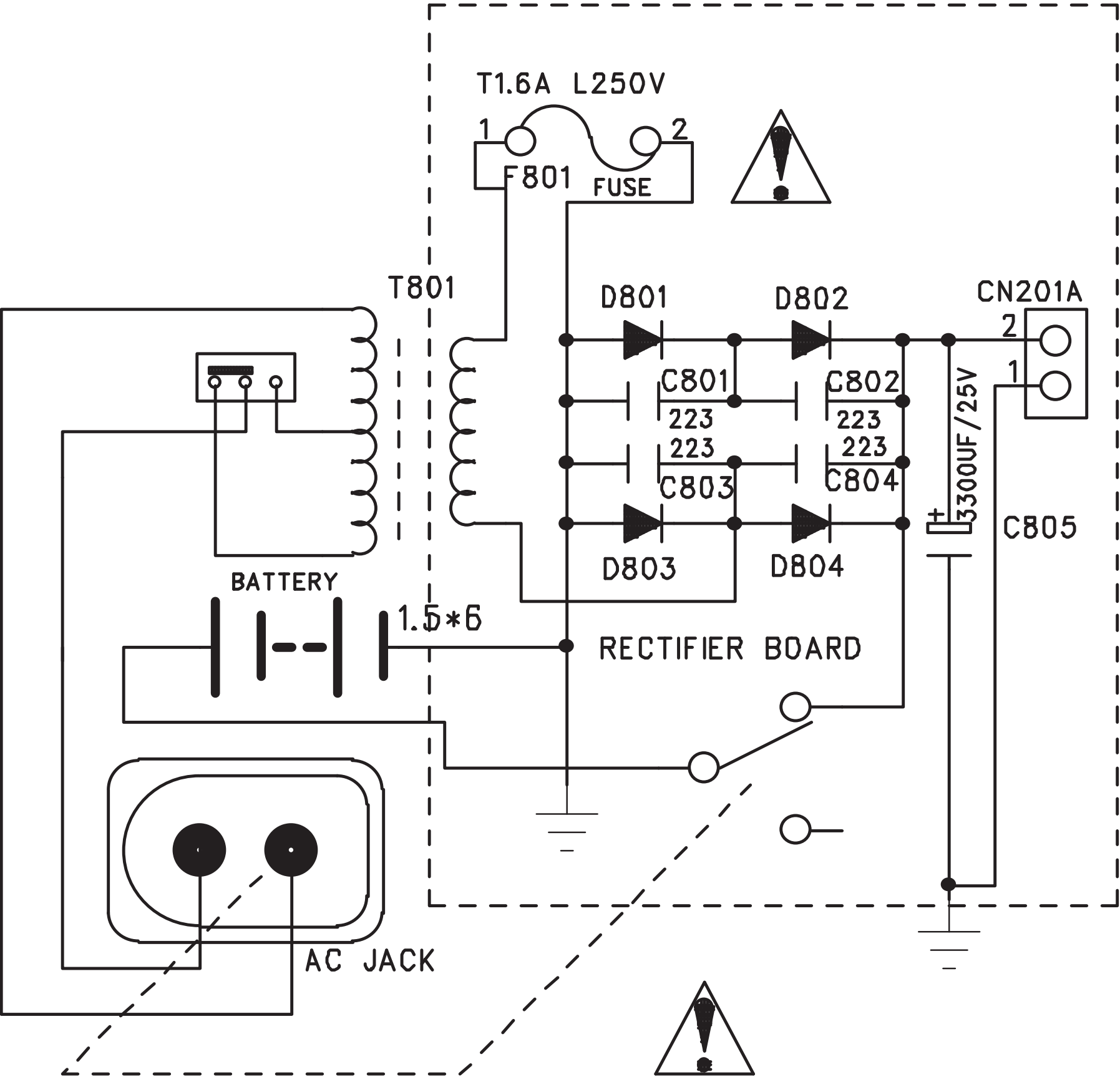
USB BOARD-LAYOUT DIAGRAM
TOP VIEW



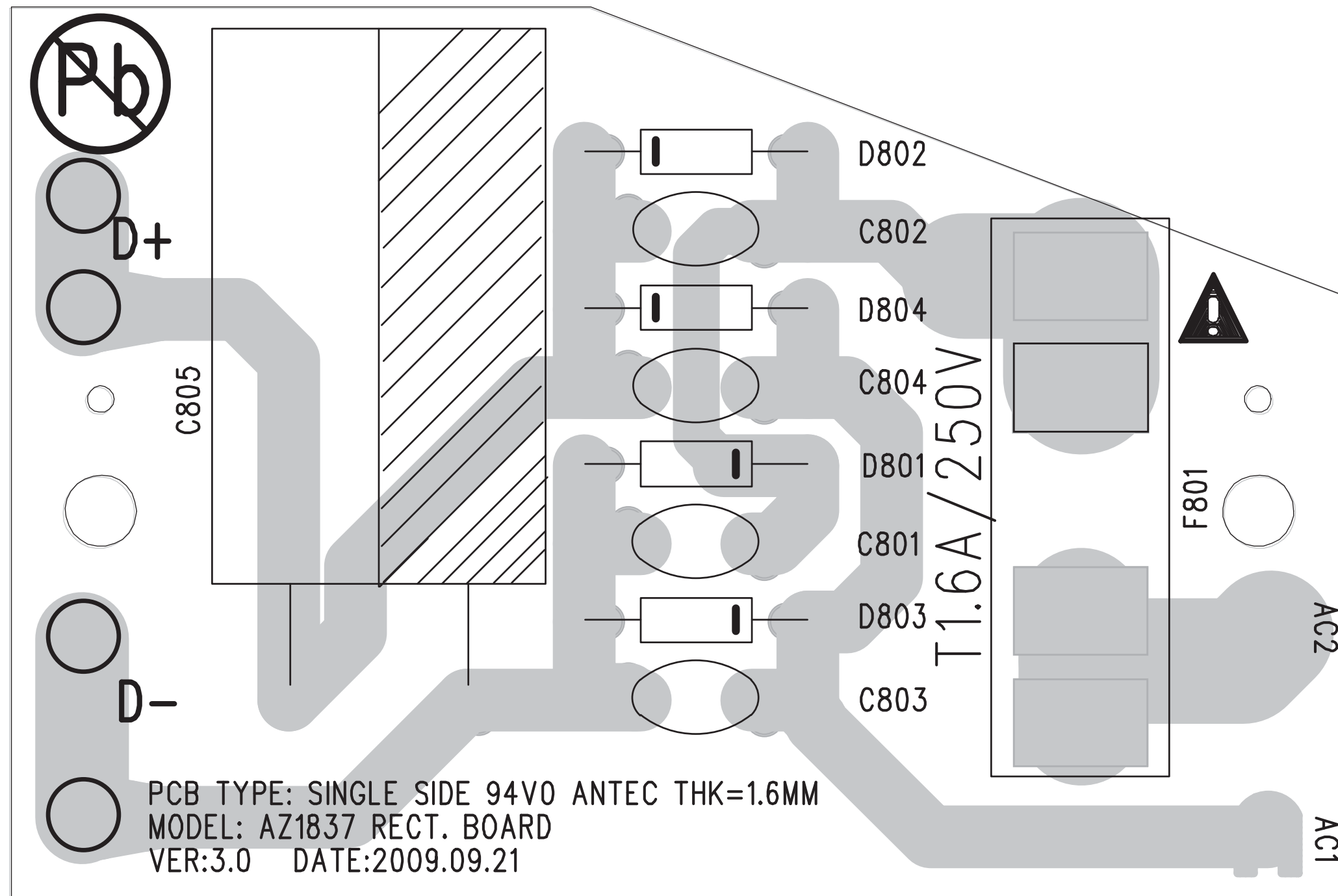
USB BOARD-LAYOUT DIAGRAM
BOTTOM VIEW



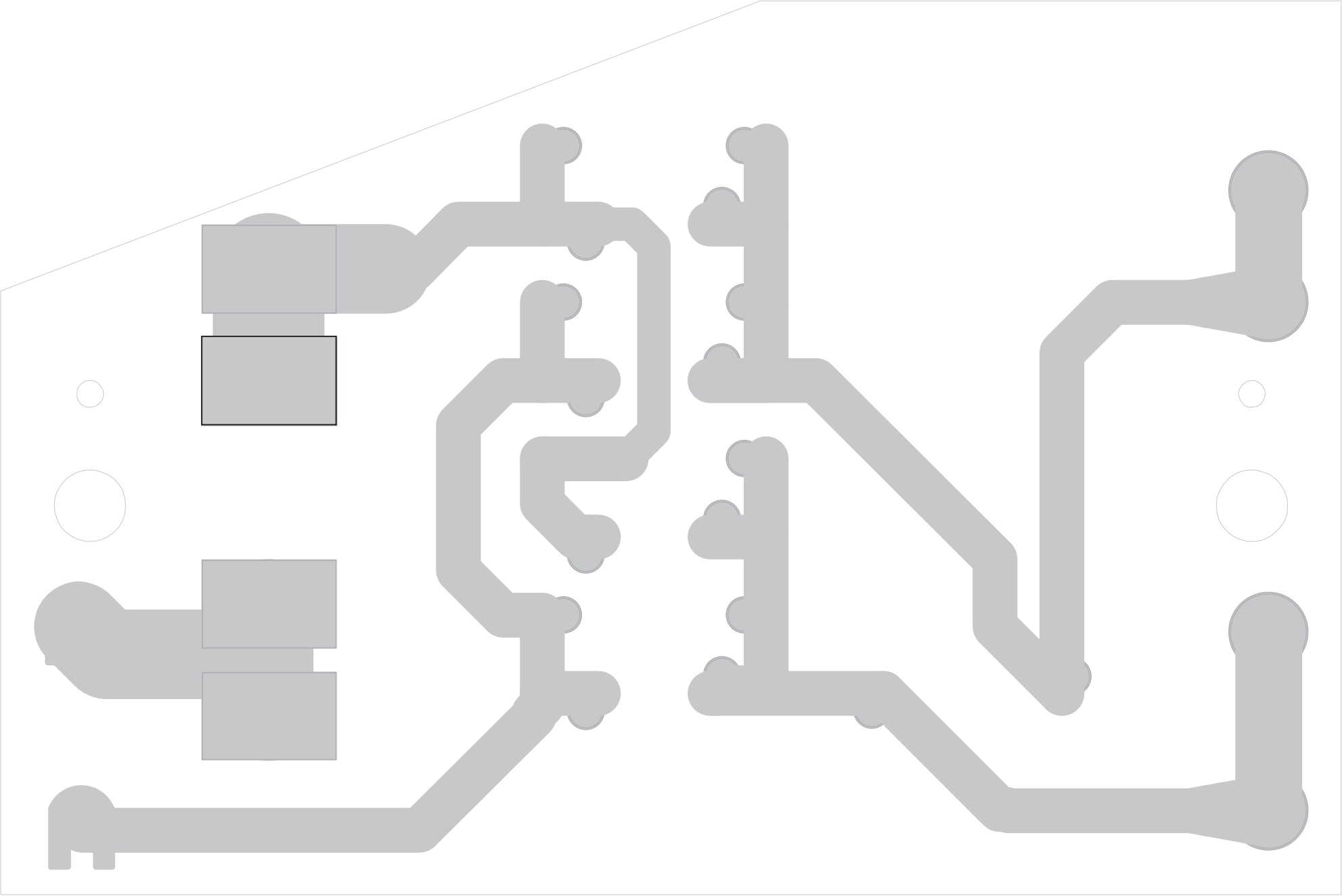
RECTIFIER BOARD-CIRCUIT DIAGRAM



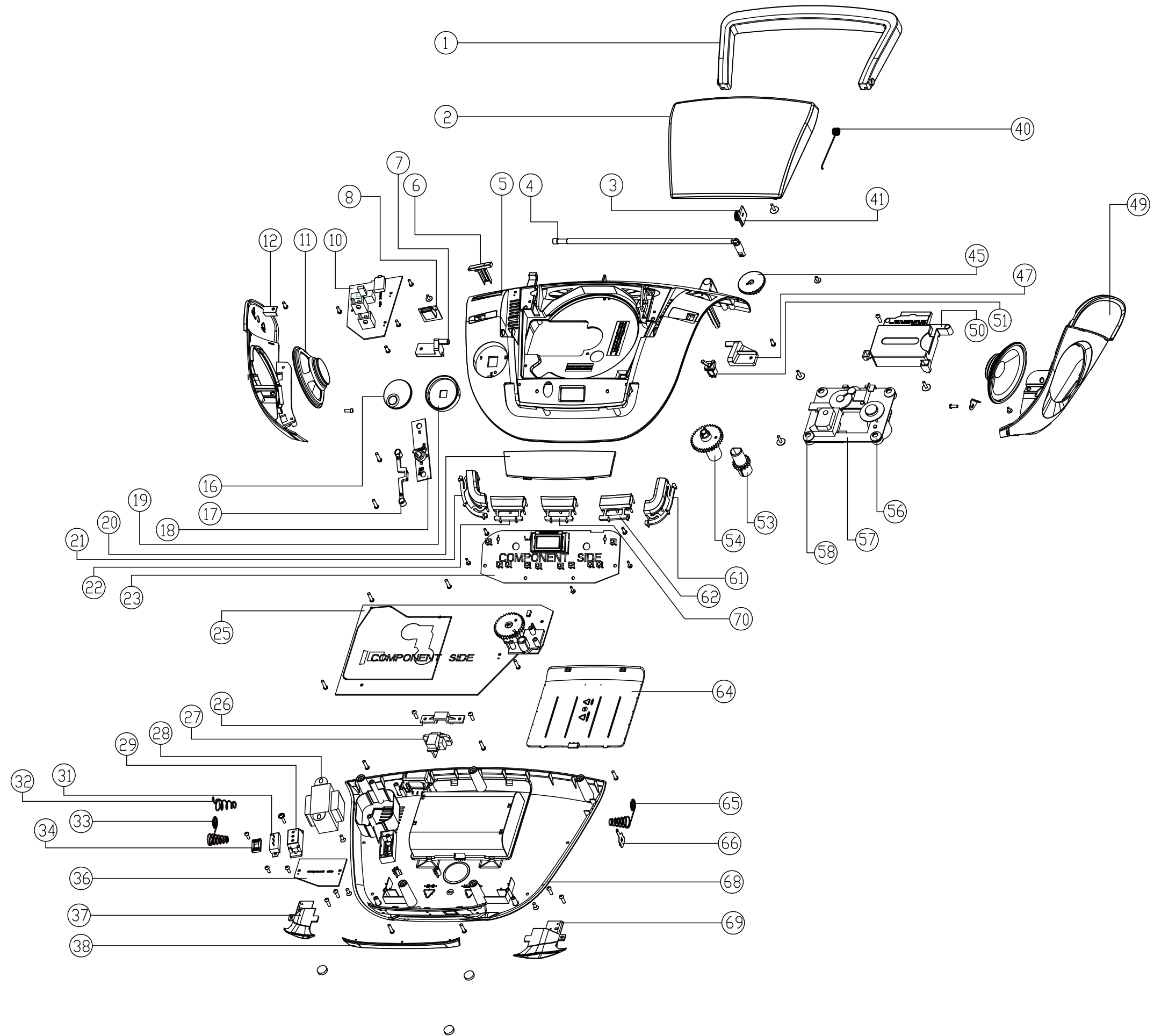
RECTIFIER BOARD-LAYOUT DIAGRAM
TOP VIEW







RECTIFIER BOARD-LAYOUT DIAGRAM
BOTTOM VIEW



SET MECHANICAL EXPLODED VIEW



MECHANICAL & ACCESSORIES PARTS LIST

1	996510030502	HANDLE
10	 996510031044	POWER PCBA
11	996510030538	77MM SPEAKER 8R 1W 3INCH
12	996510031046	LEFT CABINET
16	996510031043	VOLUME KNOB
17	996510030534	VOL-PCB-BRACKET
18	996510031038	VR PCB
19	996510030527	VOL. DECO RING W/PLATE
2	996510031048	CD DOOR /55
2	996510032562	CD DOOR /73
20	996510030549	LENS LCD /55
20	996510032712	LENS LCD /73
21	996510031031	FUNCTION BUTTON A
22	996510031032	FUNCTION BUTTON B
23	996510031058	LCD PCB /55
23	996510032713	LCD PCB /73
25	996510031042	MAIN PCB
26	996510030531	AC SOCKET HOLDER
27	 996510016704	2PINS AC SOCKET
28	 994000005096	TRANSFOMER EI-41 120/230V /55
28	 996500039377	TRANSFOMER EI-41 230V 50Hz 9V /73
29	996510021543	AC SELECTOR COVER
3	996510000931	CD DOOR GEAR
31	996510000874	VOLTAGE SELECTOR WS-12J01-GC7
32	996510031023	BATTERY SPRING
33	996510031021	BATTERY SPRING
34	996510030509	AC SELECTOR PLATE
36	996510031029	RECT PCB
37	996510030512	SOUND PIPE (L)
38	996510031059	LENS PANEL
4	994000003393	ROD ANTENNA 2-SECTIONS L=420MM
40	996510030507	CD DOOR SPRING
41	994000001409	CD DOOR GEAR HOLDER
45	996510030529	TUNING KNOB
47	996510030517	ROTATE BRACKET R
49	996510031037	RIGHT CABINET
5	996510031045	TOP CABINET
50	994000001417	DUST COVER FOR DA12N
51	994000001422	CD DOOR SWITCH 1P1T
53	996510030541	TUNING GEAR B
54	996510030518	TUNING GEAR C
56	996510030528	CD DAMPER GRN COLOR 658N
57	996510030505	CD MECHANISM DA11B3VZSS
58	994000005115	CD DAMPER BLACK 658PH
6	996510030532	SWITCH KNOB
61	996510031022	FUNCTION BUTTON E
62	996510031041	FUNCTION BUTTON D
64	996510031027	BATTERY DOOR
65	996510031036	BATTERY SPRING
66	996510031034	BATTERY SPRING

Note: Only these parts mentioned in the list are normal service parts.

MECHANICAL & ACCESSORIES PARTS LIST

68	996510031028	BOTTOM CABINET /55
68	996510032559	BOTTOM CABINET /73
69	996510030516	SOUND PIPE (R)
7	996510030537	ROTATE BRACKET L
70	996510031035	FUNCTION BUTTON C
8	996510031039	USB PCB
A	996510030536	TUNING GEAR A
ACCOIL1	996510018690	1.5M VDE POWER CORD /55
ACCOIL1	996510000876	5 FT VDE APPROVED POWER CORD /73
LINE10	994000001423	16P FFC L=70MM P=1MM
LINE6	996510000935	2 PINS PLUG ADAPTOR
LINE7	996510001906	AUX STEREO CORD BLACK
RC	996510032558	REMOTE CONTROL

ELECTRICAL PARTS LIST

MAIN BOARD ASSEMBLY

CN105	996510021555	FFC SOCKET P1.0MM (ANGLE TYPE)
D101	996510010774	DIODE 1N4148 FDLL4148
D104	996510010774	DIODE 1N4148 FDLL4148
D105	996510010774	DIODE 1N4148 FDLL4148
D106	996510010774	DIODE 1N4148 FDLL4148
D107	996510010774	DIODE 1N4148 FDLL4148
D108	996510010774	DIODE 1N4148 FDLL4148
D109	996510010774	DIODE 1N4148 FDLL4148
D300	996510010774	DIODE 1N4148 FDLL4148
D301	996510010774	DIODE 1N4148 FDLL4148
IC101	996510021675	IC M5673 128P LQFP
IC102	996510021673	IC SCA4720
IC103	996510031019	IC PROGRAMMED A25L020Z01A
IC104	996510003844	I.C. VOLTAGE REGULATOR
IC201	996510018432	IC D2822N
IC300	996510031033	IC SA2111C SDIP-24
Q101	996510024762	TRANSISTOR KTC9014S
Q102	996510012833	TRANSISTOR BC857B
Q103	996510003718	TRANSISTOR KTC-8550C
Q104	996510024762	TRANSISTOR KTC9014S
Q105	996510024762	TRANSISTOR KTC9014S
Q106	996510024762	TRANSISTOR KTC9014S
Q107	996510024762	TRANSISTOR KTC9014S
Q109	996510003718	TRANSISTOR KTC-8550C
Q110	996510024762	TRANSISTOR KTC9014S
Q111	996510012833	TRANSISTOR BC857B
Q112	996510012833	TRANSISTOR BC857B
Q113	996510030525	TRANSISTOR BC817-40 SOT23
Q114	996510030525	TRANSISTOR BC817-40 SOT23
Q115	996510024762	TRANSISTOR KTC9014S
Q116	996510024762	TRANSISTOR KTC9014S
Q117	996510012833	TRANSISTOR BC857B
Q207	996510024762	TRANSISTOR KTC9014S
Q208	996510024762	TRANSISTOR KTC9014S
Q311	996510024762	TRANSISTOR KTC9014S

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST**MAIN BOARD ASSEMBLY**

Q312	996510024762	TRANSISTOR KTC9014S
X101	996510011310	CERAMIC RESONATORZTA16.9344MHZ
ZD101	994000005744	ZENER DIODE 5V1 1/2W


ELECTRICAL PARTSLIST**POWER BOARD ASSEMBLY**

D201	996510010774	DIODE 1N4148 FDLL4148
D202	996510010774	DIODE 1N4148 FDLL4148
D203	996510010774	DIODE 1N4148 FDLL4148
D207	996510010774	DIODE 1N4148 FDLL4148
D208	996510010774	DIODE 1N4148 FDLL4148
D210	996510010774	DIODE 1N4148 FDLL4148
D213	996510010774	DIODE 1N4148 FDLL4148
DZ201	996510012835	ZENER DIODE 5V6 1/2W (TC5V6)
DZ202	996510011336	ZENER DIODE 7V5 1/2W (TC7V5)
JK201	996510003840	3.5MM STEREO JACK
Q201	996510001414	TRANSISTOR KTB772 (KEC) TAPE
Q202	996510024762	TRANSISTOR KTC9014S
Q203	996510012833	TRANSISTOR BC857B
Q204	996510003717	TRANSISTOR KTD882 (KEC)
Q210	996510030524	TRANSISTOR BC807-40 SOT23
Q212	996510024762	TRANSISTOR KTC9014S
R282	996510031047	FERRITE BEAN 2K7R 100MHZ
R283	996510031047	FERRITE BEAN 2K7R 100MHZ

USB & VR & LCD BOARD ASSEMBLY

USB JACK	996510001071	USB JACK 4P ANGLE TYPE
VR201	996510030514	ROTARY VOLUME F-122KGP
IC600	996510025149	IC ET8861M LCD DRIVER
LCD	996510031061	LCD DISPLAY GS-35468-TRPC
SW600	996500039269	TACT SWITCH
SW601	996500039269	TACT SWITCH
SW602	996500039269	TACT SWITCH
SW603	996500039269	TACT SWITCH
SW604	996500039269	TACT SWITCH
SW605	996500039269	TACT SWITCH
SW606	996500039269	TACT SWITCH
SW607	996500039269	TACT SWITCH
SW608	996500039269	TACT SWITCH
SW609	996500039269	TACT SWITCH

RECT BOARD ASSEMBLY

C805	994000003217	AL.E.CAP 3300UF 25V
D801	996510011339	DIODE 1N4003
D802	996510011339	DIODE 1N4003
D803	996510011339	DIODE 1N4003
D804	996510011339	DIODE 1N4003
F801	 996510018427	FUSE 1.6A 250V D5X20MM

Note: Only these parts mentioned in the list are normal service parts.

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Service Manual

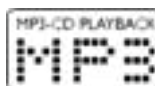


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2.0 SAFETY INSTRUCTIONS

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD**(NL)** WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."

**(GB)** Warning !

Invisible laser radiation when open. Avoid direct exposure to beam.

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spårren är urkopplad. Betrakta ej strålen.

(SF) Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alltiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarsel !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

Caution: These servicing instructions are for use by qualified service personnel only.

To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

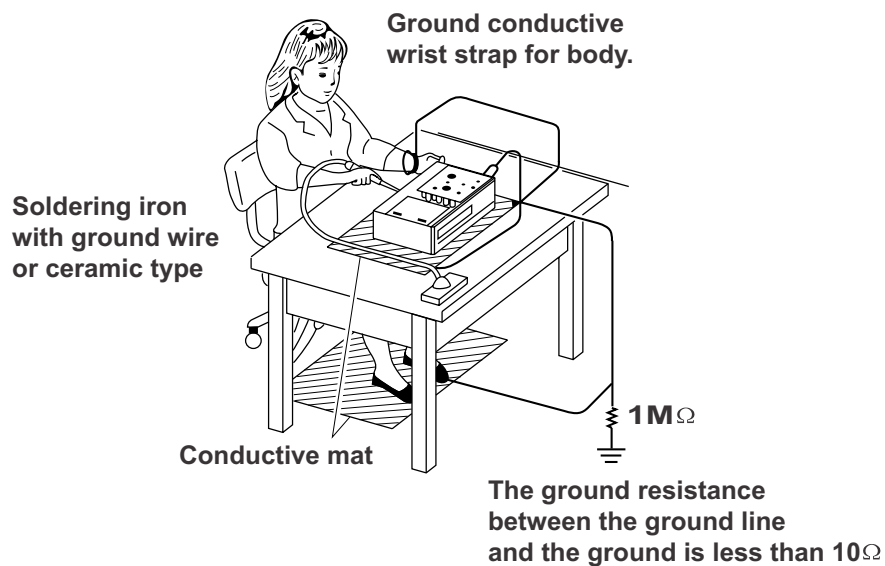
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electrocity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode form damage by static electricity.

And also, the LSI and IC are same as above.



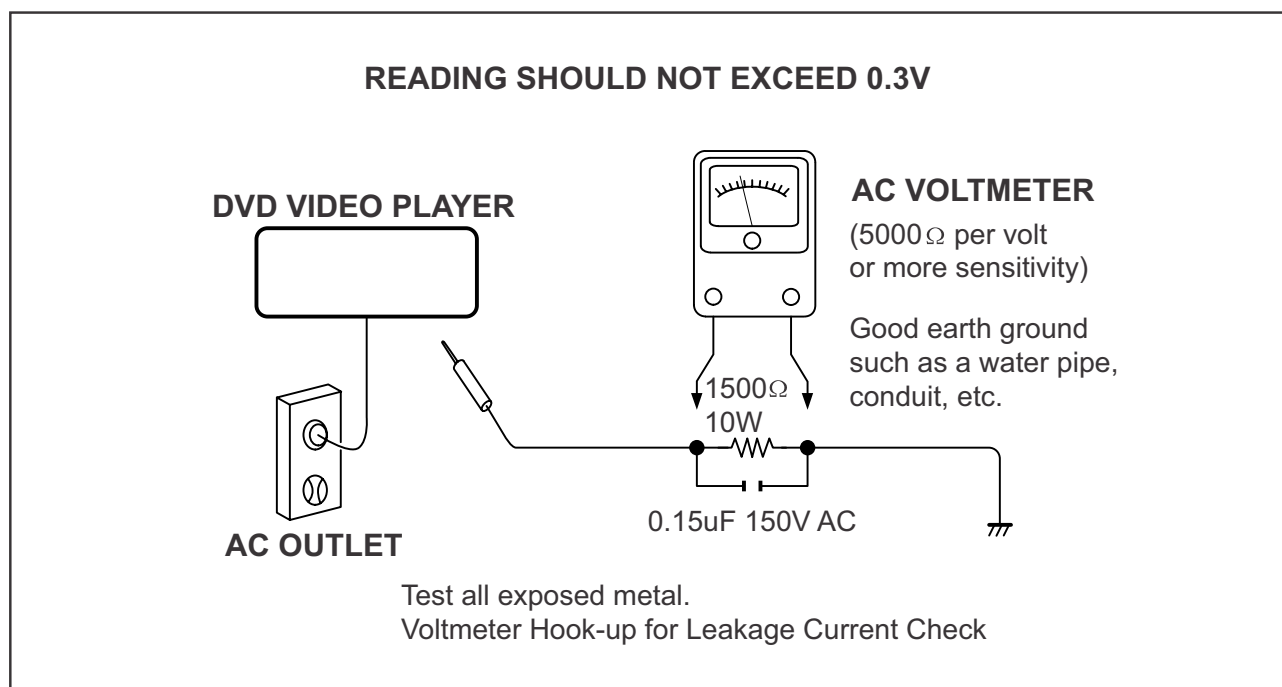
SAFTY NOTICE

SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor, paralleled by a $0.15\mu\text{F}$ 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

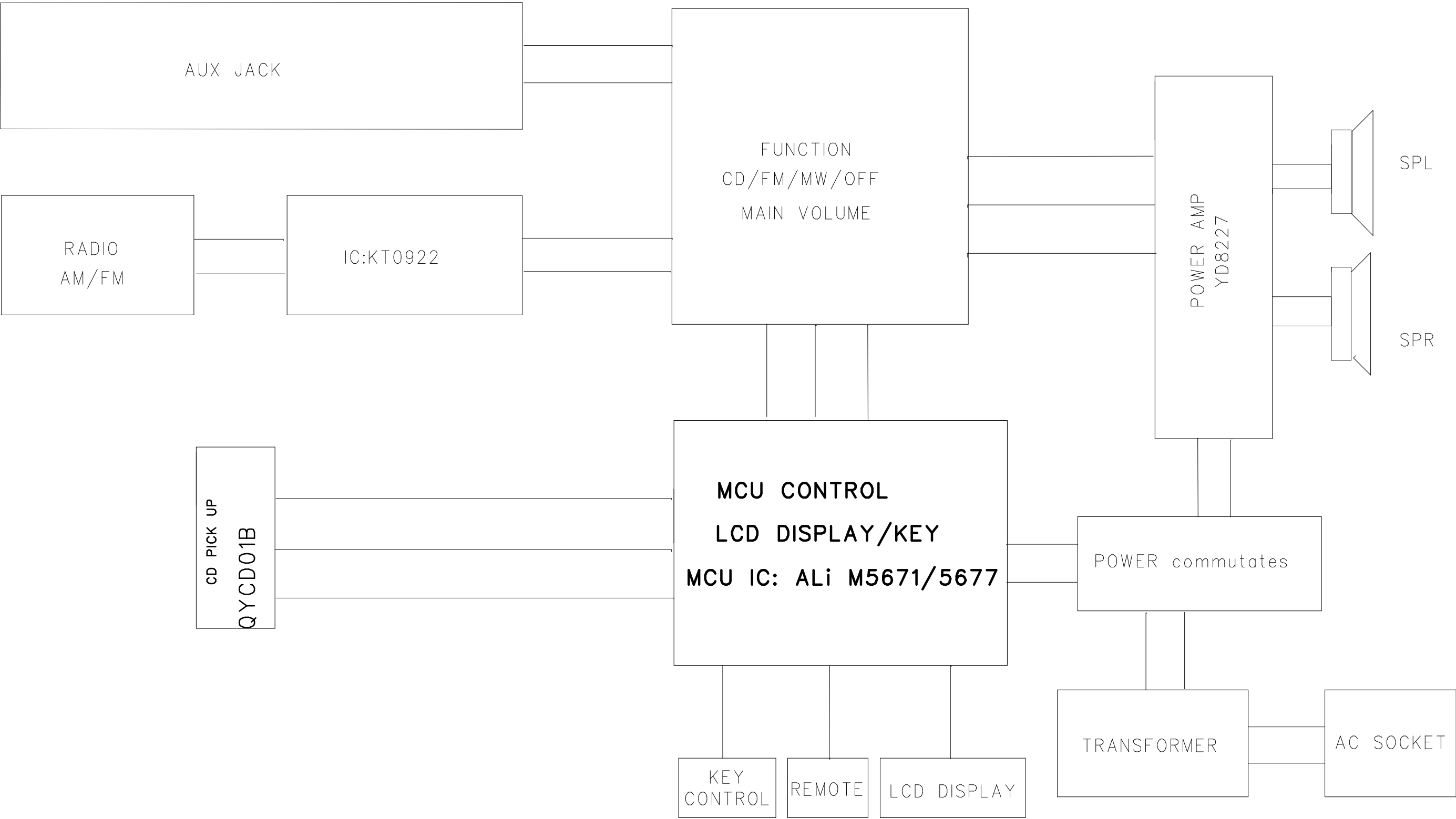


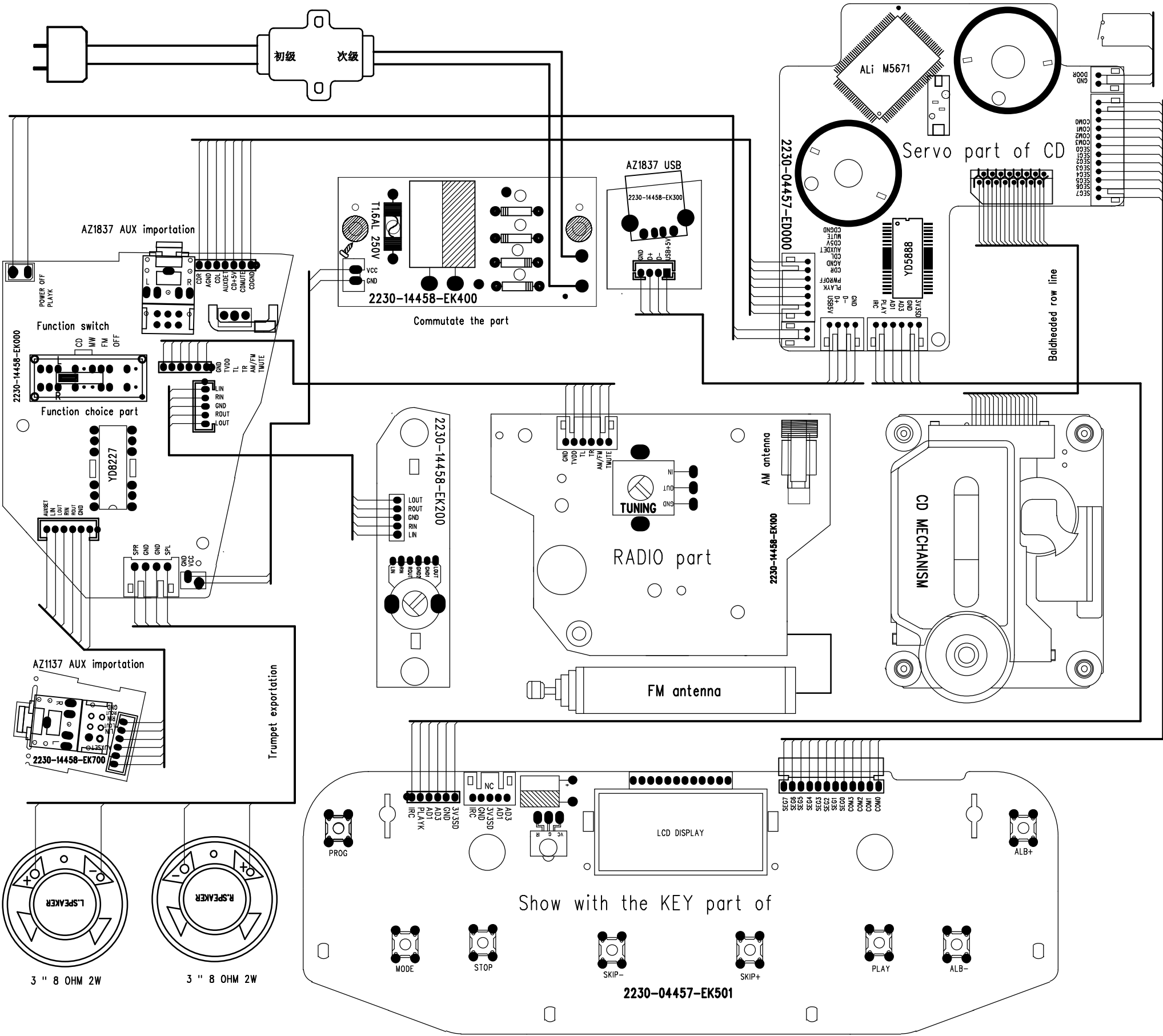
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

BLOCK DIAGRAM

3-1

3-1

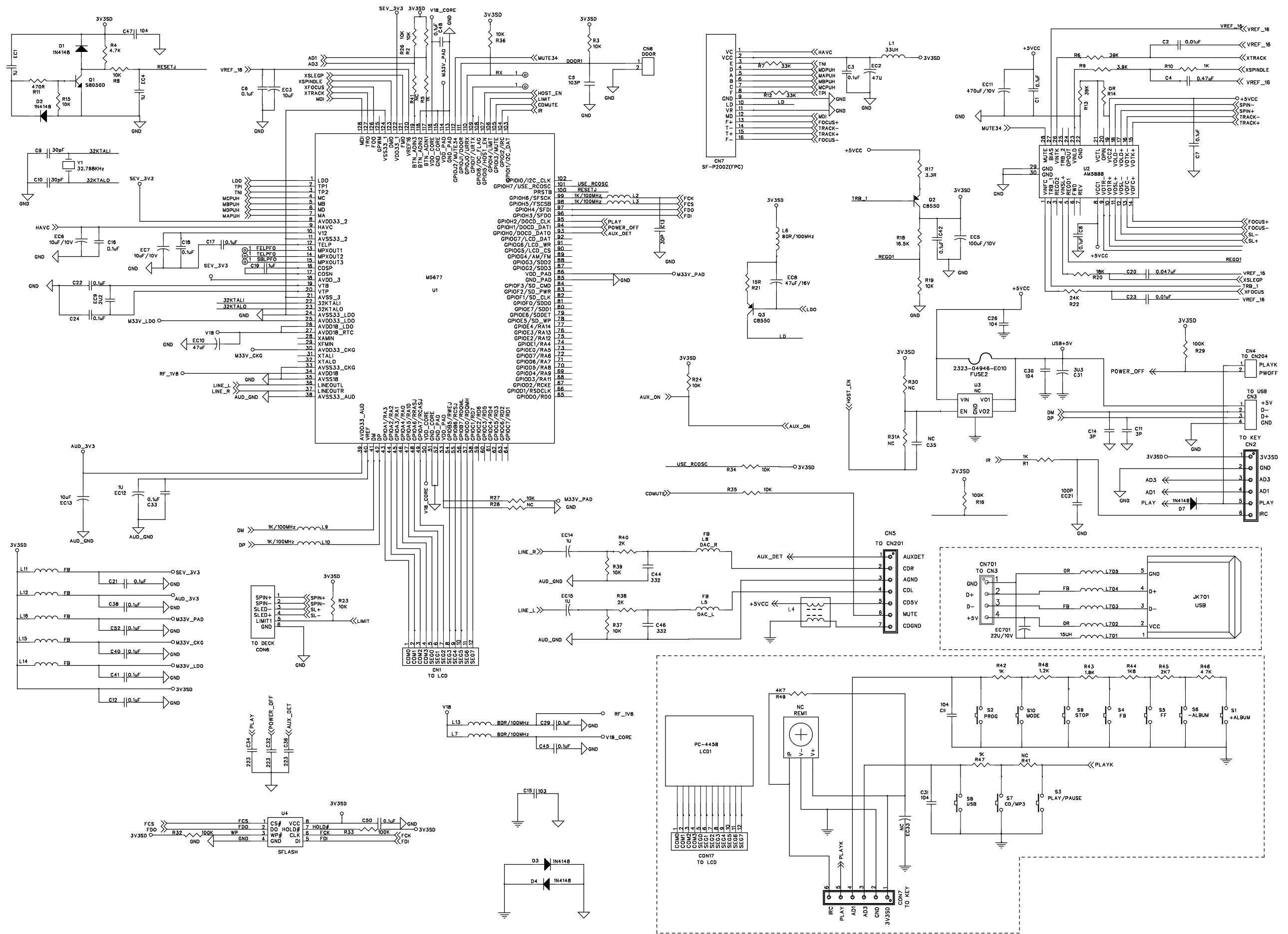




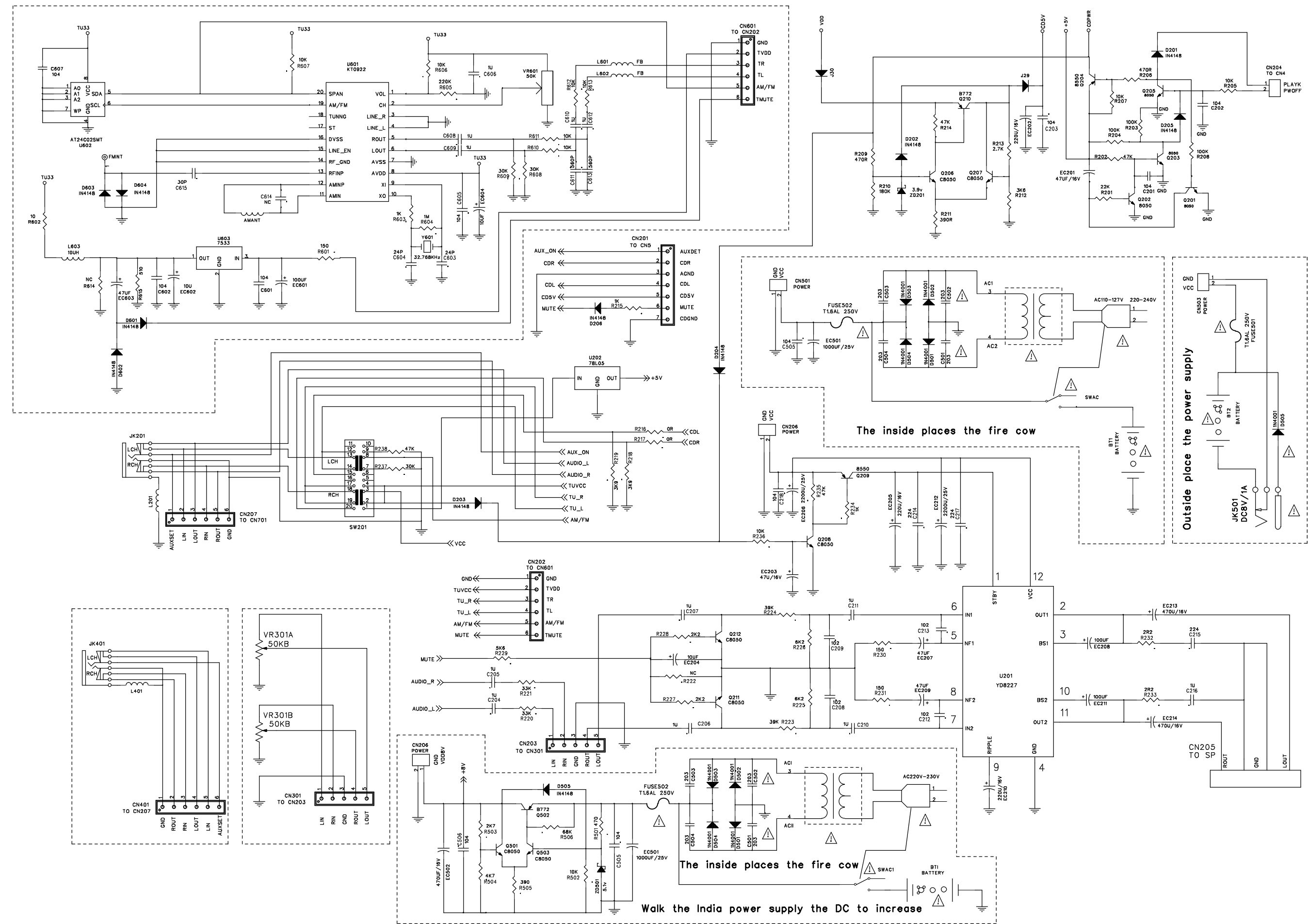
CIRCUIT DIAGRAM - PART 1

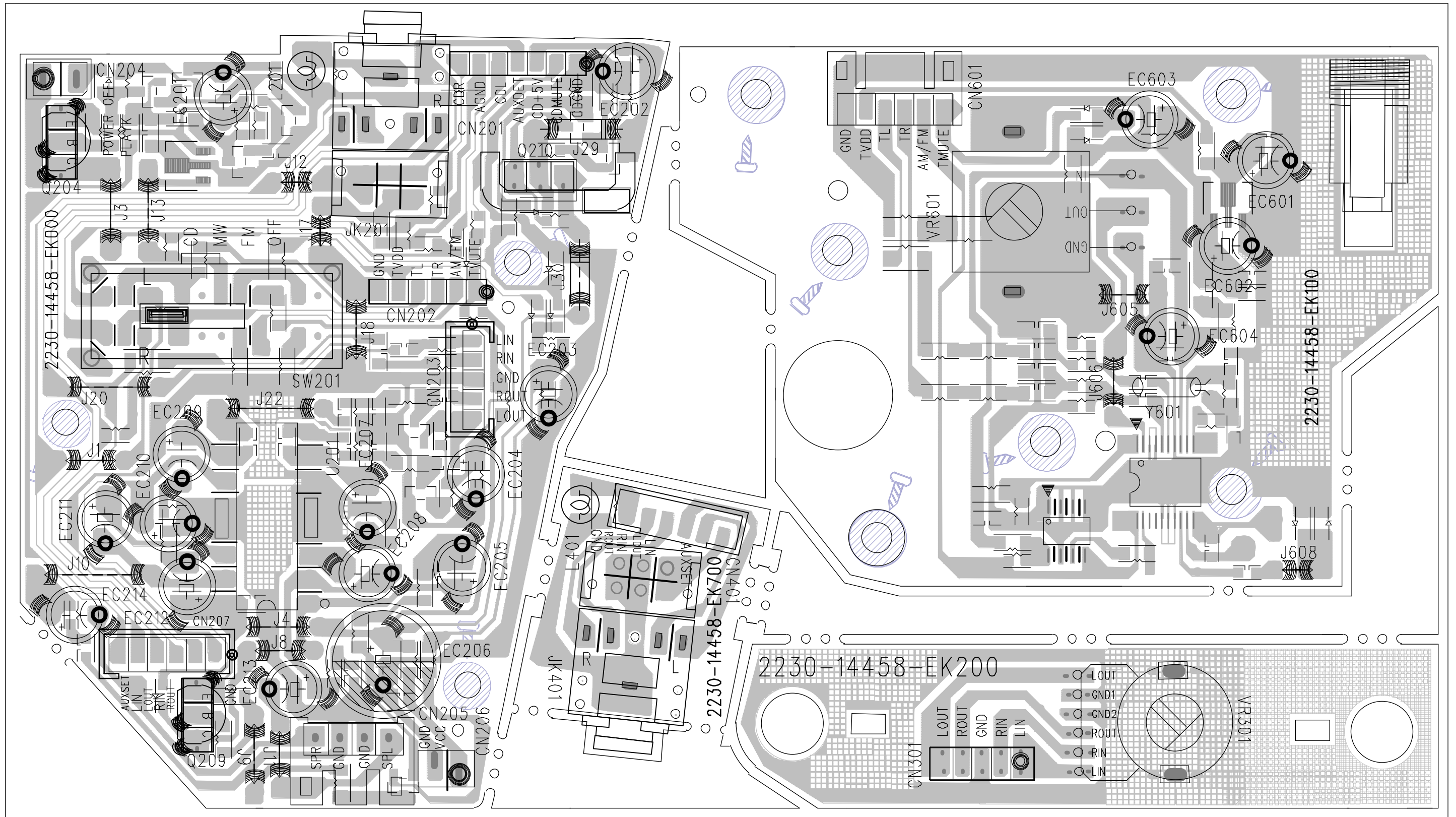
5-1

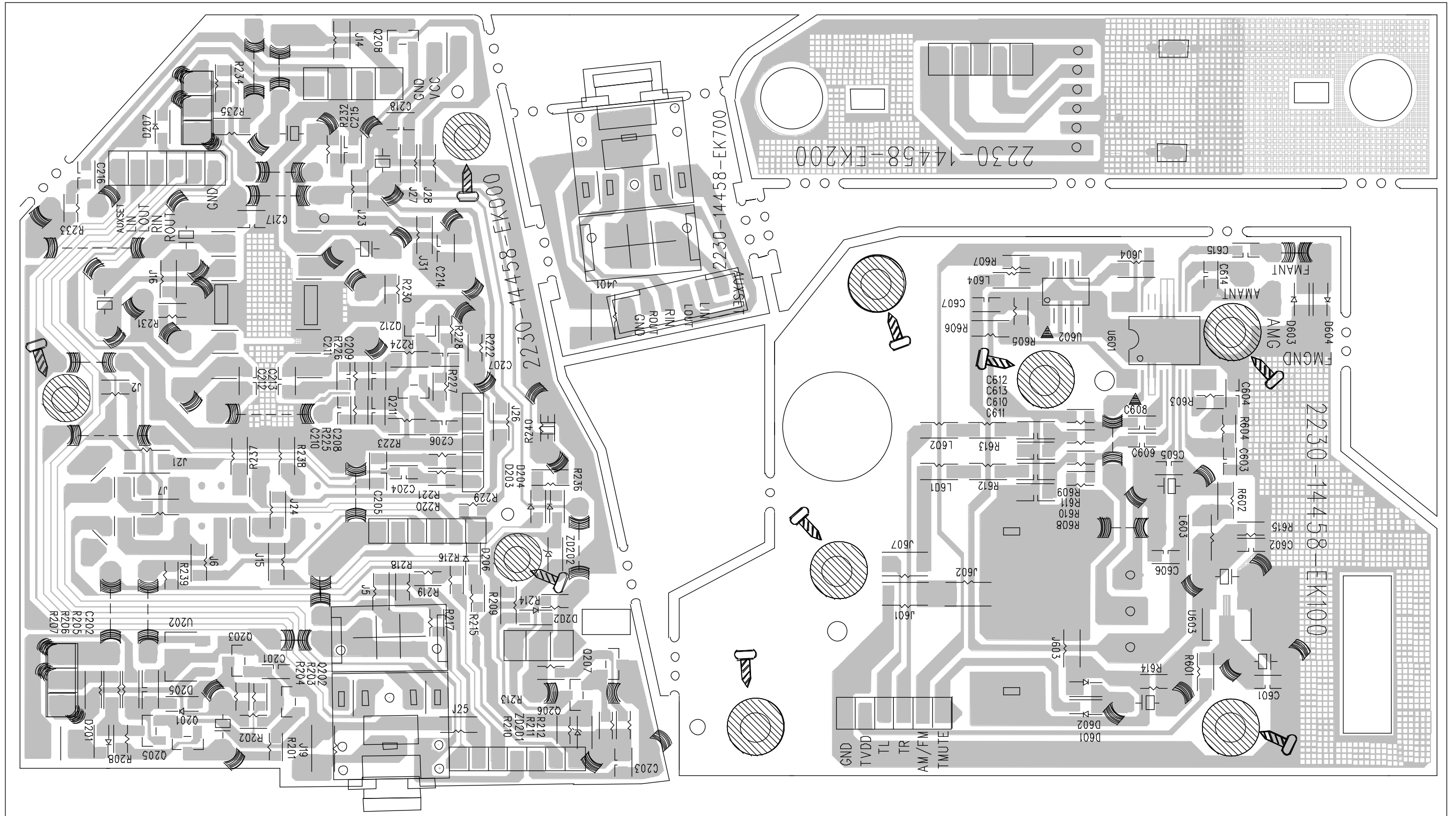
5-1



CIRCUIT DIAGRAM - PART 2







EXPLODED VIEW DIAGRAM

